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| 1027 | 9078 | A | 1977 | 3 | 1421 | CLRRLEHFGTRPPPTPLPSSPERERQESP RLGNPKVSATLHGRLPSSFMGKVVWQQ MYPQYATYYYPQYLQAKQTLVPAHPM APPSPTSTNDNHRISISSNSRWDQLSRTN LYIRGLPPHTTDQDLVKLCQPYGKIVS TKGNFGIRTTNNCKGYGLFDF*QPMQO LKKAVSALKASGSSSKWAKQQGQDAP TNLYISNLASMDIEQELNMLKPFQGV ISTRILRDSSGTSRGVAFARMESTEKCE AVIGHFNGKFIKTPPGVSCPHRNLL/CV LSFAGWEGQEKGDRTPNKYIPNGRPWA *EEGRGETLLGLTLTYTDPITAAIQNGF YPSPSYIATNRMITQTSITPYIASTVHAFQ VQSPSWMQPQPYILHDPGAVLTPSMEH TMSLQFASMIPLAQQMHLSCSTGT MPATSAMQGYLPQYAHMQTTAVPVE EASGOQQVAVETFNHDSPPYTFQPNK |
| 1028 | 9079 | A | 1978 | 2 | 1440 | NSGPSSFMGKVVWQQMYPQYATYYYP QYLQA/KVWKAFGNTK*KGRVKNRKM VGWQTL*TLFLVGQKNQSLVPAHPMA PPSPSTSSNNSSSSNSGWDQLSKTNL YIRGLPPHTTDQDLVKLCQPYGKIVS AILDKTINCKGKGYGVDFDSPAQAQA VSALKASGVQAQMAKQEQDPTNLYIS NLPLSMDEQELENMLKPFQGVISTRILRD SSGTSRGVGFARMESTEKCEAVIGHFNG KFIKTPPGVSAPTPELLCKFADGGQKKR QNPKNYIPNGRPWHREGEVRLAGMTLT YDPTTAAIQNGFYPSPSYIATNRMITQTSI TPYIASPVSAQYVAKETRENKYGSAIK VQSPSWMQPQPIYFYQHPGAVLTPSM KHTMSLQPSMIQPFWPQOMSPSVH*G QHPEPYHALQPSLCKGALLGPQYCTYC RLTAVPC*GRQSGQTGRLAVRGRNLDPF SIYRFNPNK |
| 1029 | 9080 | A | 1979 | 104 | 340 | TGQSYKKRKFVKLQINRYLSFL/VF KEIRSHSVA*TEHSGAIMAHCCLKFLGL SNPPASASQVAGTSGVQYHTSLI |
| 1030 | 9081 | C | 198 | 2 | 28 | MIDTHTPS* |
| 1031 | 9082 | A | 1980 | 118 | 528 | |
| 1032 | 9083 | A | 1981 | 1 | 864 | |
| 1033 | 9084 | A | 1982 | 3 | 4258 | |
| 1034 | 9085 | A | 1983 | 44 | 1360 | VWDCPGLRWASFYRLRSWAHRPQCGT ISFVTVNAEEQEKQFVSSRTKQKAKEK LEKCGEDDETIPSEYRLKPAATDKDGKPLL PEPEEKPKRSESELIDELSEDFLSECKE KPSKPTKTEESKAAAPVSEAVSRSTS MCSIQSAPEPATLKGTVPDDAVEALA DSLKGKEADPEDGKPVMDKVKEKAKEE DREKLGEKEETIPDPYRLEEVKDKDGK LLPKESKEQLPMSDEFLLDALSEDFSGP QNASSLKFEAKLAAISEVVVQTPASTT QAGAPPRDTSSDKDLDDALDKLSDSELEQ ROPDPDENKPMEDKVKEKAKAEHRDKL GERDDTIPPEYRILLDDNGQDKPVKPPPT KKSSESKKPADDQDPIDALSGDLSDSCPS TTETSQNTAKDKCKKAASSSKAPKNGG KAKDSAKTTEETSKPKDD |

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| 1035 | 9086 | A | 1984 | 159 | 2467 | EKKGSYEKKAASLGSSQSRRTYAGGTAS VTKVSFAFSGATSKSYSMNPETETKAIPVS QQMEGPHLPNKKKHKQAVKTEPEKKS QSTKLSVIVHEKKSQEGKPKETEPKSLP KQASDTGSDAHNKKAVRSAAEQQP'S EKSTEPKTFQDMISAGGESVAGITAISG KPGDKKKEKSLTPAVPESKPKDPKSGK ISGMDAGLADLIDITLGGPEETEENTTY TGP'EVSDPMSTSYIEELGKREVTIPPKYR ELLAKKEGTFPPADSSKPIGDDAIDAL SSDFTCGSPTAAGKKTEKEESTVLKAQ SVAGTVRSAAFPQEKKKVVKDITMSDQA LEALSASLGRQAEPELDRSKEVDEAK AKEEKLKCGEDDETIPSBYRLKPATDK DGKPLLPPEEKPKPRSESELIDELSEDF DRSECKEKPSPTEKTEESKAAAPAPVS EAVSRTSMCSIQSAPPEAGTLKGTVDQDD AVEALADSLGKKEADPEDGKPVMDKVK EKAKEDREKL'GEKEETIPPDYRLEEVK DKDGKATPCPKSLKEQLPMSDFLLD ALSIEDFSGQNASSLNFEDAKLAGAISE VVSQNPFRFTT/QAGAPPRDTSQSDVK ALGDVLDKLSDSLGRQPDGP*GTNQ WEG'S*REKAKAEHRDKLGRKRWTLFP PEYRIILADDNGQDKPVEGHLTKKSEN QRNPGDDQDPIDALSIDLDS/CPSTTET SQNTAKDKCKKAASSISKAPKNGGKAK DSAKATEGTSKPKDD |
| 1036 | 9087 | A | 1985 | 2 | 788 | EFSASIVGICTMPWALLLLTLTHSAVS VQAGLTQPPSVSKDLR/QATLTCTGTNS DNVGYQGAALWQHGHGHPKLLFSRN NNRPSGIHKRFYGSNSGTTATLTISGLQ AMDEGDYCYCNSRDSSGNHLRVFGG/GT QVDP'SLRVQGMPPVWNFVPGPSSEAS SPNKAHTGVVVISDFLTPGN*QVAWKA DSQPPPKAGVETPPHPPKQSNKYTDSIS YLSLTP*PGGSPHRSLLQARVTH*RGAPL EKTVAPTRMFI |
| 1037 | 9088 | A | 1986 | 226 | 401 | TSGDHWNIAVAPHENSLLLVQGHDYK YRYFGLIVCVL*QAVTPEEPQSVPLRRT R |
| 1038 | 9089 | C | 1987 | 211 | 285 | MFYFPFNPRYFSVGFIAMNRHTD** |
| 1039 | 9090 | A | 1988 | 107 | 192 | |
| 1040 | 9091 | A | 1989 | 1 | 285 | YIYIYIYIYIYIYIYIYIYNLDQSW FAPLLVCGP**AQVVTSELGNRN*SEKTF TWRICMRNIGRCSLGMQLQDYKFPDFRS KVMILVY |
| 1041 | 9092 | A | 199 | 780 | 888 | NKRNOGSSRVGTHL*SQLL/RLRQENH LNPEGRCS |
| 1042 | 9093 | A | 1990 | 27 | 437 | IAEGNWCVYMPDIIWVFPQAEAEEDCH SDTVRADDDDEENESPAETDLQAQLQMF RAQWMPFELAPGVSSSNLENPCRAARG SL/QKTSADTKGQEQAKEEKLSDIHDVT NYIFFFWHMEIFDTVSRHYNQTFGT |

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| 1043 | 9094 | A | 1991 | 25 | 1488 | GGSSAAASGVSSRADAPVLAQSPASAGN GRPSTPRVPGSRHRPSAPRSGPLPREDGC RTPGPQLPLPGALLRPRTLLSSAAEDK ARSRHPDTQHPSSGGRCRGTESSPSSAA GRPASMAEABEDCHSDTVRADDDEENE SPAETDVQALIPMIQAWKLEPAPRVTS SRLENRPCRAARGSLQKTSADTKGKQEQ AKEEKARELFLKAVEEEQNGALYEAIF YRRAMQLVPDIEFKITFTIRSPDGDGVG NSYIEDNDDSSKADLLSYFQQQLTFQE SVLKLCOPELESSQIHISVLQMEVLMYIF RWVVSDDLDTLSLQSLVCRGFLTSC A'IRDP*KYARPGPALKVWGQKACIKLVS VTRPGREDVF*ERPPVS/RFDGVYISKTT YIRQGEQSLDGFYRA'WHIQVEYYRIRF FPDGHVMMLTTPPEEPQSVPLR'RTREYQ GLDAIPTGVITRLSPRHRITRTQSIWLLIT KEKRKEKPL |
| 1044 | 9095 | A | 1992 | 242 | 433 | |
| 1045 | 9096 | A | 1993 | 243 | 549 | |
| 1046 | 9097 | A | 1994 | 81 | 436 | AKQGISPEGVMDVNTALQEVKLKALIH VWT*TRGNSRS*PKPLDKRQAH'LCVLA SNOCDEPMYVKLVEALCAEHQINLN*GL IDNNET/MGEWG*GLLLKFRGGGKPRK SWFGICSCC |
| 1047 | 9098 | A | 1995 | 3 | 452 | |
| 1048 | 9099 | A | 1996 | 3 | 484 | PTLLVPTDSERTHPWLLSPADKTTVK/AP AWGKVGAAHVRSMCAEALERMFLSPFT TKTYFFHFDLSHGSAQV*GPRARKVAD ALTNVAQRGTIDIAQRAVPPSLDLHAH KL'RVGPGSTFKLLKATGLG*PWPGPPS PAEFN'PWRQLRPLWDKYSWVSC |
| 1049 | 9100 | A | 1997 | 797 | 1049 | SEEECCSCLPSPAGSDQRL'LTCHLPCVI VNSEWG'VARY*LNVCS*PVFFSVGPK QYPYNLYLERGGDPSKEPERVVHYEI |
| 1050 | 9101 | A | 2 | 25 | 619 | EFHRLREN'FWCSPADKTNVKAAGWK VGAHAGEYGAELERMFLSPFTTKTYFF HFDLSHGSAQVKGHGKKVADALTN'A VAHVDDMPNALSALSDLHAHKL'RV'D PVNFQSS*SQLPCLGEPWAAHLP'AEFQ LAVATSSLGTFKPGLSVEAPLLTFOITFK GWKPRVGHAFFALWASQPLLFP'APVP PWSLK |
| 1051 | 9102 | B | 20 | 103 | 282 | EDTAAQSSPGRGEEAEASAAEQGGEQ AYLAGLAGQYHLERYPDSYESMEPIA HLLRP* |
| 1052 | 9103 | A | 200 | 224 | 552 | KVLRVARCGGSLSRPSTLGGQGGRML RSGVRDQPGHSETPSLLKMQLAGHG G/RAL*SQLLGRLRQENHNLNPGRGCSSEL RSRHCI'P'SRVTV*DSISKKRKKVL |
| 1053 | 9104 | A | 2000 | 546 | 882 | CHVPPTLGTRGQGTQDPPFPHPSPGAP APCP'PPA'LLGPPRPPFSPVP'GPGGGRK PFTSAP*A*VFPRTPLGALSRG*GSPVVG RGATPSP'PTSPACGPLKCWWHLIKN |
| 1054 | 9105 | A | 2001 | 43 | 311 | |
| 1055 | 9106 | A | 2002 | 178 | 817 | SPASGHCR'LNGAAVAMFGCLVAGRLVQ TA'QQAEDKFFVFDLPDYESINHVVF MLGNN'PWPEGMGGSVYSP'YDPSNGMP VVKLLG'SVTNGKPSAIFKISGLKSGEGS QHFPGA'NEYCPN'HLHLLR'LGISGELLDS MAQQTPVR*CCWYPOQDSTQFTQKML DNFYNFCSSFAVSAQMTPS/SI*KCSFR PNVVLKWYEA'FVSNNIKAFYN |

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| 1056 | 9107 | A | 2003 | 283 | 840 | TLPAGFTDVISIHKTGENFCLICINGNREFA VHCITLLEEAKYKLCVKRKIVFHDHAHTIH YLDSEFKVNDTV*TKGIDTFDKFDGNGLG RIGVITNRKHKRGSFDVVHVKDANGNRFR APWLSNIFVTGKCNKPWISLPRGKGIRLT IAFHSDKWPSCDSIVQNLCKRFRSQGDGTGI KNSEARRCSNLQV |
| 1057 | 9108 | A | 2004 | 1 | 966 | GRPAPEGGPLSLPNAAMARGPKKHLK RVAAPKHWMLDKLTGVFAPRSTGPHK LURECLPFIIHLNRNLKYVALTGD/EVKKI/ CMQRFIKIDGQVRN*YNIPLLGFMDDVI/ SNEKTGENFPF*SN*HPRGPLL*HRITPE EAKYK/VCAKMRKIFCGPTKGIPHLVTS *CPAPHPAYPRNPLIQGEMNTHSLRILET GQD/ITDFHSKFDHLVTLQMVTVGGA/NL GRNWVLTQQRRTGPGSDFRWFT*KDA NGNKLATSDFSNIFWLLGKGNKPWISL PRGKGIPPHHLLERDKRLAAKQSSWV KWGPWVWSDLLVP |
| 1058 | 9109 | A | 2005 | 1 | 383 | RIRKLCNLICVGESGDRLTAAKVKLEQLT GQTPVFSKVREYELRKNFSDTGNFGF GIQEHIDLGKYYDPSIGIYGLDFYVVLGRP GFSIADKKRRTGCGAKHRSKEAMRW FQQKYDGIILPGK |
| 1059 | 9110 | A | 2006 | 3 | 224 | |
| 1060 | 9111 | A | 2007 | 176 | 384 | |
| 1061 | 9112 | A | 2008 | 2 | 669 | IMAQDOGEKENPHAGNFAFRKLVNLIC VGESGDRPTRAQVLEPAQQKQTPCVF PKA*HTPVKSLWASRLNEKIAFFTATSS EGAKARNLRCRGLKRFSEYGVQNDNTT FSGYWEFTFGNGQEHIDLGKYYDPSIGIY GPGTSYVVLQVPPGQFQHPQTKKPPQQG CIGAKIIRSKSEEAIRWFWQKQYDGIILP GOINSPLSKSKNKKFSVNEKNKNTL |
| 1062 | 9113 | A | 2009 | 688 | 884 | CSCVWNLSFHNGAFHLKTPYSRIKKAHH /WMAHVYSPITLGGRGGWIT*SQEFETSL SNIHKPLY |
| 1063 | 9114 | A | 201 | 41 | 320 | |
| 1064 | 9115 | A | 2010 | 442 | 780 | IEFVIKKIFFPFSHCLICLAIDLQ*YMG VPRIMQLKTCYVRGKYRGVLEEQNL WK*IHILPQVREDGRPCPLRLKLGKGGK GGGEPLNQHGDPVQGNPPYFLFCHMRN P |
| 1065 | 9116 | A | 2011 | 136 | 219 | DPAREGHPVCCAGQRPCVDGHHQGEKGF LKAALVELGASNPWS*DEVKPQSALP QASALTWVSYYQQGVLSATILYEILLGA TLYAVLVSAVLAMAMVKRKF |
| 1066 | 9117 | A | 2012 | 3 | 762 | TLRGAVLRGAAGRLGGGLVLVLAGRAM GLSAVGRTAESGTAEAAAPVFLVLQQA YSTDTQMFGPGTRLTVLEDLKNVFPPEV AVFEPSEAEISHTQKATILVCLATGFPPD HVELSWVWNGKEVHSGVSTDQPPLKEQ PALNDSRYCLSSRLRVSATFWQNPNRNH RCQVQFYGLSENDEWTDRAKPVTOIV SAEAWGRADFGFTSVKSYQQGVLSATI LYEILLGKATLYAVLVSAVLAMAMVKR KDSRG |
| 1067 | 9118 | A | 2013 | 1 | 1010 | RYSPFFKAYMGIIRLCRVAFCLAVGLVD VKVTQSSRYLVKRTGKVFLECYQDDMD HENMFVYQRQDPLGLRLRYFSYDVVKM KEKGDIPEGYSVSREKKERESLJESAST NQTSMYLCASSLFNSGYQETQYFGVGT RLLVLEDLKNVFPPEVAVFEPSEAEISHT QKATILVCLATGMFPDHVELSWVWNGKE VHSGVSTDQPPLKEQPALNDSRYCLSSR LRYVSATFWQNPNRNHRCQVQFYGLSGN DEWTDRAKPVTOIVSAEAWGRADCGF TSVSYQQGVLSATILYEILARGRPITYC |

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| | | | | | | LCW*APLVLMAMVKEKGFLKAALEVE LGAF |
| 1068 | 9119 | A | 2014 | 344 | 463 | |
| 1069 | 9120 | A | 2015 | 1075 | 2102 | QOKPGQPLFLGSISPKSFKTRKQKSSSK AEYNLTACKCLCKRKYSSQIMLKRHM QI/RPODNSFWNKL*KRKR**YCQOFRN KS*S*TSRFCRIFTP*FHYPFSTE/CN*REQII QMKKRTHROHRKIKLNLTKLCPKSTSP SAAGGQOKTRKPKLSAGDFDKQLYCKL CKROFTSKQNLTKHIELHTDGNNIYVKF YKCLPTCYETRKRDRDIRHITVHHKSS RYLGKITASLEIRAIKKPIDFVLNVKVAKR GPSRDEAKHSDSKHDGTSNSPSKYEVA DVGIEVKVTKNFSLHRCNKGKFAFKK TYLEHHKTHKANASNSPEGNKTKGRS TRSKALV |
| 1070 | 9121 | A | 2018 | 1 | 408 | SNPRVRGGGTHRSQGAFANMCRGGR MFAPT/KTWRRWHRRVNTQKRYAICS ALAASALPALVMSKGHRIEEVPELPLVV EDKVEGYKTKEA VLLKLLKAWNDIK KVYASQRMRAKGKK/RCGR*ERKEGC CWC |
| 1071 | 9122 | A | 2019 | 28 | 1437 | EERGCFSLPLACARPLNSVYSEKGESESG KNVTLPAVFKAPIRPDI VELSFPNLRK NNRQFYAVSELAGHQTKAEISWGTRGA GGSKFPEVRGGGTHRSQGAGFQNMCI GGRMFPAPIKTLGRRWNRRVNTTP/QK RYAICSAALASALTSNWVMSKGHRIEE VPELPLVVEDKVEGYKTKEA VLLK KKLKA WNDIKKVYASQRLRAISKGKM RNRRRIPGAGGFCIIYNEDNGHIAFRNIP GNYS*A*AKLNLKVLAPGIGHGGRFCI WTEKCFSGKLDELGYGTWR*S*ASPORS NYHSFPLHKMINTDLSRILEKQORSORA PPGHIAKIHRRVLKNPTEKTLRIML KLKPHMQKTHAAGTTSSPRPRNHKLR VVDKGLLHQHRLQAKSDEKAAVAGKK PAVGKKGKAPVGVKKQKQKPLVGKK AAATKKAPEKKPAEKKPITTEKKPA VGLPTNSVLPGRGSVLPTEVGLDALGEG LKGLCGPNPVVETITNGQFPMQGVLT GRVR*ET*DQSTODSASCYSTCPAAQTA AYCSE/ASSVPRKKKLLQNMNFNWP RRLRRSARNKLRRDADFLCELLLSLN FVRNKKIF |
| 1072 | 9123 | A | 202 | 80 | 518 | |
| 1073 | 9124 | A | 2020 | 1 | 2196 | |
| 1074 | 9125 | A | 2021 | 1 | 207 | |
| 1075 | 9126 | A | 2022 | 1 | 1062 | |
| 1076 | 9127 | A | 2023 | 171 | 476 | LPRFQTLRNTETEDHSCCSCGRRRFAAA VASRSQ*GNPASLAGSSTTGARSCAPVA RTQRCPRCAACGCWRWRTRWICSAGK WFAHSQFSARIDWLQFLEW |
| 1077 | 9128 | A | 2024 | 1 | 781 | |

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| 1078 | 9129 | B | 2025 | 1 | 1602 | MGYRARIRNVHVLATQNHSTLVT VFPFLPVNPEYSATRNQGRQKLG FGNLIIDILSESRRQQAARAEQPH DGVTFSPVPTPHTRHSYAMHMLY LKVLSLQMLGHKSISSTEVYKVF ARHRQPTRRKAPAVLGGCRAIATR WFWHAEVBRSRGRSPQCADPGWAS SRGVLVCDECCSVHRSLSGRHSIV HSAWPPTLLQSGFPPSRRAAPRA TPRTTEAAWAAMALITLLVLLTL RLHRNPRRGESIWGPITADSDTV DHGLLAFAYHRI.VRFLLVWLCPG LVNNSRGGVFNPIHPCPRHQGARF GRAEDVTLYHPCAHPWLKQLALL ACMANPSLTPDFSLTDQDVEDJEL RTPHLHLATTLGHLECARVLLAHG RENRSWGTVLQEAIVSTQDLELV YRDYQRVVKRLASIPVLEKLRKQ PGRPLARLRSSVSSGAVGMKSES WFWGP* |
| 1079 | 9130 | A | 2026 | 2 | 692 | ENRSGFQSRRIYSISKQKKLITF NT*SWNAVASREECYLGVT*SR *TKDRLRRT*SMPCYSDSM/SMQ HLNTIQMRCELIRLQHQTETLNQ KRRERELRRKHVMEVRQPKGSK PNKSSFGYGLQNSQTRQYKALRN TTPKSEHKAVLKRLEEQTRKLA YDHSINEMLSQAVSLFLGQNKFS PPPE |
| 1080 | 9131 | A | 2027 | 1 | 2933 | MDDIFQEARQYRHNQAYAYSIGD DDDERIVRFHTRVINHKKRKS DLTEAAYSISRQKRM.LYLFVDQ GTLQEHGICEIHVAKYAEIFLTS KDIRQALKSFAGKEVVFYRPEED GYESFPWFIKRAHSPSRGLYSV FFIGLQNRFTQFRLSETEKINP ESLCQYRKPDGSGIVSLKIDWIE QSYQRMDFRRRFLQHIFVLRER PET |
| 1081 | 9132 | A | 2028 | 6994 | 7054 | LISTSDLYFL*DI*VRCKQTGVLP TIPRSSLEVNPREFTYHLCEL/S YLSFLIWTMG*LLHLHTELL*G *VLCMEPDIVTAHSAVCTQFV/S NNVISLRKSLFF*QSFALVTAQ DLGSLQAPPPGFTFSCLSLPSW LPRPANFLYF**RQGPETGFHH QADLELLTSGDPPTLASQSGVIT VQPGEGFCNCCCVCESGPFKE TNSLYGLNLYLEIDQHFRNMKIV LILILLHLICYFALSIDLCSH*P WPGAVAHTCNFSTLGNRGRWIV* TSLVNMARLY |
| 1082 | 9133 | A | 2029 | 411 | 713 | |
| 1083 | 9134 | A | 203 | 63 | 552 | |
| 1084 | 9135 | A | 2030 | 3 | 84 | SGSTHASGGLQASRWRRAGTSR TSTSTASLRGLPTVATGLRSGSW VAG*GRPTRPVGSRRRDGGGERV CQA |
| 1085 | 9136 | A | 2031 | 3 | 519 | SRWRRAGTSRCSVSSLTSTSTAS VATGDYPPPDQASSNLTLSPPPG NRGQPWPVLGRGGANAAASSSR GGG/SSFARLSSTHGTGGGEGV *GPVGGPLPTLLVGGGDVTDASL GGLEILEKP*AGRCPTIDGNPRE RAG |

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| 1086 | 9137 | A | 2036 | 247 | 1294 | MPNTAMKEKRCLLMGERSGSGKNQAM RSIIFAKLPPFARDTRRLGATIDVHSHVR FLIGNLVNLWDCCGQDTFMENYFTSQR VDNIFRNVGSGDFK VFDVESRELEKDMH YYQSCLEGHPPRTLPAKINFLAVHKMD/ LLVQEDQRDLIFKEREEDLRLSRPLEC ACFRTSIWG*GRFYKAWVQAFVYQLD FPNVAAGRLNLRDFAQINAEDEVLLFE RSITFLVISHYQCKEQORDVHRFEKISNIN KQFKLSCSKLPASFQSMVVRNSNFAA FMRHLFT*NTYVMVMVMSDPVDPFLGPL LINHSCPGNHFEETGRELNGPQATVPF YGV EY CQNALSEKA |
| 1087 | 9138 | A | 2038 | 311 | 458 | |
| 1088 | 9139 | A | 2039 | 1271 | 1540 | |
| 1089 | 9140 | A | 204 | 1 | 69 | SGVKNRGYVVGISGGTTNKVSP*SRVS *PMAVSACY*VKNRGYVVGISGGTTN KVSP |
| 1090 | 9141 | A | 2040 | 176 | 552 | MRSSKQMKPNFPRCSSTVLSVRGMVLF LTLACPRFKMSSRTDFRFGNPQV*GSTI CSIFRLPSILSMRTTKDQGMFIWQFQGM RFHF*SESTHLVTLFPGIM*E*FQSLKPE PFSLLSCYCH |
| 1091 | 9142 | A | 2041 | 204 | 401 | WHEFTGAENHCKTLPKEN*WCLCKSH PSEPKNAAYNRTLCLDGISKSEVSLGTSF EMWTSQGOE |
| 1092 | 9143 | A | 2042 | 123 | 311 | PSRRLGHPRWALSPHLLPORFCSWVS FAPASCPC/DLFSISRSSSVGLMKHRM LGLAELL |
| 1093 | 9144 | A | 2043 | 2459 | 3030 | TSPSTSLRPAPIPSPSPSRFPSSSQTTSA SSPSSAWPKAASRQQA*RCRE*LPWSWT QSSPPLKSWGLDAPPPPLSTCLASSTIR GAGAAATPQCSAPCLHR/CDKVPGFAVA QCINQHSSPSLPHSRHPPFAGAPAAAGA PATATLEAFARPPPPPPQPRVQSGVAGK DADECSACRRPTVMAATGF |
| 1094 | 9145 | A | 2044 | 1125 | 1695 | DFFSKIDDSHLQVLFEQQLLILFFHFLN DCSNSLFFFSEMESRSVAQLECTG/AILA HCNLRLLGSSDFPALASRVAGTTGTCHH TQLIFVLVETGFHHVQAGTCMQSQLI KGLRENHLPNGGCGCNEPRSRPLRSSLG NRVRLSQREKQNP*DAQYSEKGLNLTLEL QAKF*GVSHVFPGER/VSLISQNP*PFWK KVIKQVSRRLRFKKPQDPFRASQSLRIFQS HH*KS WNTYSQORQVILFLCLSSYVYFK SFSKQGPRTLQIQLCPWAWSTCCRSLE PCTNARVTHLPTLNPIEDATKQDSFLH GMVPIVRQGHQRM*ENAGEFFPWELGL WMRGCFAGHTIRLLSFL*PFLSSF*R*SR K*SSKMLDKNSQNNKTHASTSLIKNLP/ HLAPKSMATATKSNFKELR/LQQR*FT SSSP/CLKISY*YSSLSI*MTAIVFCFC/ FSEMESRSVAQAGVHWCNLSGLSQLSP GFKRFSCLSI.SSSWDYRHAPHPAHIFCIF SRDRVSPCWPGWSQSPGPHGLPAWASP KCWDYSREPPRPQOQYSFSVTRTSLSPIT LRLCIACPNAFTDPSRVLHLFVPASSIP PNLKVTLKY |
| 1095 | 9146 | A | 2045 | 1 | 577 | PLKRSDDGNCNDRPTRPTRPDTVTFSNL KQTRMVHLTPEEKSAVTALWGKVNVD VWGKALGRLLVYVPWTQRPFEFSGDL STPDVAMGNPKVKAHGKKVLRGAFSDG VLAHL/DNLKGTFAHTEVSLHC*QACTW DPGELQSGWGNVLCVAGPITFGKRIST PPVAGLPNQENWLAWCWLNALGPQVIT |
| 1096 | 9147 | A | 2046 | 16 | 370 | |
| 1097 | 9148 | A | 2047 | 1 | 1125 | |

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| 1098 | 9149 | A | 2048 | 1 | 1941 | MWKHLWNWVIGSGWKTLDVLEEDRKT KENLVLLRDFSSGCDQSIDRNMDSSEVQA DEFSDRNEEVIGNWSKGQPCYTLAKDLS ALCPYPKALWKVELKSDDLGEIPLQLR LVHGGQVNLDMEDHQDEYIKPRLRFK AFSGEGQKLSLTPFVSTPSPSEEDKSI LNAVVLIDDSVPTTKIQRILADGSRLIQR NSTHRRKAVNGSPNQLPDKPGSPFCL APLITVCPAADDPSPALWLHLVAARSTS QRNGQVLCYLPKRWGAVAVCTSVAEACC WVFWLLERQNDSGMQLGGPPSAJFRW LAAPADAPAAATSGAGCLATAGGAKTR KLALAELEYEDVKCKSSKSNRPKATVPK SPRTTPQRTVKNWFLIAPNAGEDAEQQ ELAFIAGGTAKWYSHFRPFNGLLQRAT WNVSRKLLRTTQISGSLRYWGFFGQAK VAATLAKQEVIPPYLSLGRGAEFKGLSQ NSLQAPLHGTSQGGKNDYPETAVLPLKL REKVSRRKRLASSRCLSLGTCMSEEA FLVITNSSSCSCEGFFPLYIAGKYAQDFG LVEEACFPYTGDSFCKMKEDCFRYYS EYHYVGGFYGGCNEALMKLELVHHGP MAVAFEVYDDFLHYKKGHYHTGLR/D PFHPFEL |
| 1099 | 9150 | A | 2049 | 1 | 2077 | MTYPENIQIKKITGVQWMVPLKYKEGS KVTTYCNETMTGWVHDLGRNWACFT GKKGVTASENVYVNIHLKNSQEKYSN RLKYDHNFKAINAIQKSWTATTYME YETLTLDGMIRRSGGHSRKIPSPVLCSS APLDVQLLVSPAKILGLYGGRMGMA GQKAPFLRAPVIGVSFADSFQPSRLQDSP QLFNQQLLSAAQVSSGSRDNCVNS MGPEKKVVVYLQKLDTAAYDDLGN HFTIYNQGFELVNDLQVGLPFFKYKEG GAARVTTYCNETMTGWGA*CVWGRN WACFTGKKGVTASENVYVNTAHLKN SQEKYSNRLKYDHNFKAINAIQKSL TATTYMEYETLTLDGMIRRKWATSR KIPRPKAPLTAEYSQK/LLHLPSTWDW RNVHGINFVSPVRNQASCGSCYFAS MGMLE/ARGIRILTNNSTPILSPQEVVSC SQYQAQCEGGFPYLIAGKYAQDFGLV EEACFPYTGDSFCKMKEDCFRYYSSEY HYVGFYGGCNEALMKLAEVHPWGP WEVCFLEVYDDFLHYKKGDPPTHGLK RPFSTPFELTNHVAALLVGYGT*KPLG MEYAWIKNKLGAAPWGLRNGFYRIPR GTDECAIESIAVAATPQFLNFRGLRPSIFI NGSASSCKGGIFTDCRLSTSIFRSLQID FP |
| 1100 | 9151 | A | 205 | 379 | 540 | IKKVRNLGPKHPRFSVLLHVSCSTNGG VLL*RSSVPRKKIKRLQNMNFWPPE |
| 1101 | 9152 | B | 2050 | 59 | 466 | MSAAMRERDFRFLHEKNMCTDLAKLE AKTGVRNSFIALGVIGLVALYVWLP HLCGFLWCMAPSPSNGAELLYKRIIRPF FLKHESQMDSVVKDLKDKAKETADAIT KEAKKATVNLX* |
| 1102 | 9153 | A | 2051 | 1 | 915 | |
| 1103 | 9154 | A | 2052 | 1 | 3180 | FRAAVAAPVYPALGTAPGGETVPEMTA AMRERFERILHDKNMCTDLAKLEAKT GVNRSFIALGVIGLEALYLVFGYGASLL CNLIGFGYPAYISIKAIESPKEEDTQWL VTVVWVYGVFSHC*NSFSDNLSWAPPF* LHG*KCGFLVGWCMAPELLNGG*NCSS KRRIIRSFSFGSTKSQIGQVLYKDP*RP PKETADANH*KPKKSLP*ILL*KKKKK GGR |
| 1104 | 9155 | B | 2053 | 171 | 256 | XVDPASSQAMELSDVTLIEGVGNEVMV VAX* |

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| 1105 | 9156 | A | 2054 | 187 | 437 | PWS*LGS LPT*QTA VQ P A P G R Y C V S R R H I R P P P G A C G P P G G T A N G N P E T L P H P S E G N D E K A E E A G E G R G D S T W G W S W G W C |
| 1106 | 9157 | A | 2055 | 2 | 165 | N Q H H H T L P P P S P H Y P H P Q * G * H Q R A P W P G C W Q G P R C R N K G G Q H Q A E P E G L Q P G L |
| 1107 | 9158 | A | 2056 | 1 | 506 | S P A S Q H C H H Y P L M M G S S V V R G A F G L P P V G P H A P G V G R M C R L L T Q * R P G A G C Y R C L I R R * R A K L G P R L E S A P P H L P P S P H Y P H P Q * G * H Q R A P W P G C W Q G P R V T A R * G G V P H P F S E A K V P L L D G P I S A L D W G P W A H P N R R A A W P Q P P * D Q L S R P V S R V G * G G H K P |
| 1108 | 9159 | A | 2057 | 496 | 1092 | Q P A P G Q L L C H L A T H P P P P G A C G P P G A G Q G K P E T L P H P S E G N D E K A E E A G E G R G D S T G E A G A G G G V E P / R * A S P * H P R P A Q K T S R C R Q Q S R G P P E I * G * H L P P S Q P W P H I C A A Q I P Q * Y R G A G C G * A R G V R G C P E E Q I L P W T R K P D E T D L P G P P A T R P S P H T A F S E H Y R O L C D S L P L T P R V S C S R P L S L L G P L G H |
| 1109 | 9160 | A | 2058 | 155 | 701 | P G L F R R G L P H P G T G P V Q S F N F P / P P R / G P E A P P P / R S P A P P S R L R G V D G L * P P * P T L L L T G R D N W S Y P E A G A R Q P P G S G G P M D P S P A P R E * D H P K A E P S P Q K K A G A G P L L T V R S R Y G Q G R S Q A E G Q S K D P * G R T P G V L P G P S P R E F P V S P I V F V L C R R F F S C K S W I M T L T F L P S G V S C G C D K |
| 1110 | 9161 | A | 2059 | 1 | 506 | D R D A E F Y K L Q E N D Q S Q L N F S D S D S S E E E E S F H S L P Y V L E E A V F R A A V A T T R G D Q E S A E A N K F Q V T D S A V F N A L V F N A L V T F C I R D L T G C L Q K L L I G K V A K D S S R M L Q P S S L L W G K L R V D I K A Y L G S V I Q L V S C V A E T V V L A A V L W H I S V L V P C F L T F P K Q C S R E |
| 1111 | 9162 | A | 206 | 287 | 449 | I K K V R N L G P K H P R F S V L L L H V S C S T N G G V L L * R S S V P R K I K R L Q N M L N F W P R E |
| 1112 | 9163 | A | 2060 | 9 | 2295 | V G C T L R V G V M A A A G S R K R R L A E L T V D E F L A S G F D S E S E S E S E S P Q A E T R E A R E A A R S P D K P G G S P S A S R R K G R A S E H K D Q L S R L K D R D P E F Y K L Q E N D Q S L N F S D S D S S E E E E G P F H S L P D V L E E A S E E E D G A E E G E D G D R V P R G L K G K K N S V P V T V A M V E R W K Q A A K Q R L T P K L F H E V V Q A F Q A A V A T T R G D Q E S A E A N K F Q V T D S A A F N A L V T F C I R D L I G C L Q K L L F G K V A K D S S R M L Q P S S P L W G K L R V D I K A Y L G S A I Q L M S C L S E T T V L A A V L R H I S V L V P * F L T F P K Q C H M L L K R M V V V W S T G E E S L R V L A F L V L S R V C R I K K D T F L G P V L K Q M Y T T Y V R N C K F T S P G A L P F I S F M Q W T L T E L L A L E P G V A Y Q H A F L Y I R Q L A I H L R N A M T T R K K E T Y Q S V Y N W Q Y V H C L F L W C R V L T A G P S E A L Q P L V Y P L A Q V I I G C I K L I P T A R F Y P L R M H C I R A L T L L S G S S G A I P V P L F I L E M F Q Q V D F N R K P G R M S S K P I N F S V I L K L S N V N L Q E K A Y R G G L G W S S C Y D L N P G S Y L H S Q A H C I G F P E L V L P V V L Q L K S F L R E C K V A N Y C R Q V Q Q L L G K V Q E N S A Y I C S R R Q R V S F G V S E Q Q A V E A W E K L T R E E G T P L T Y Y S H W R K L R D R E I Q L E I S G K E R L E D L N P E I K R R K M A D R K D E D R K Q F K D L F D L N S S E E D D T E G F S E R G I L R P L S T R H G V E D D E E E E G E E D S S N S E D G D P D A E A G L A P G E L Q Q L A Q G P E D E L D Q L S E D D |

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| 1113 | 9164 | A | 2061 | 203 | 1383 | MSSFGYRILTVAALFTLACCPSGDEKVFV EVHVRPKEAGRLSPKGSLEVNCSTTC NQPS*SGVGLGDLSD*GFCWDEQVLGN NYLGLKHFPIDTVLQCHFTL/SGKQESM NSNVSVYQPPRQVILTLQPTL/VAVGKS FTIECRVPTVEPLDSLATLPLFRGNEILA LWRTFRGRAAPAPQGGQPHSNSTVADR RGLAHRKLSPLAVLADLMSURGGNIFHK VHSAPKMLEVYETCVRTSPDWSSLVTTGG VGVACPLFVTSVLLCFIFGQHLRPASG MGTYGVRAAWRRLPQAFRPIATHGVA WPHTTVVTGTQCDSSGLRYQPWLKDCD RQQLGTLPLARIQTPLSPVPTVSPPGI TMAREGSHHGGLSLDASLPTLSFTGWH EA |
| 1114 | 9165 | A | 2062 | 503 | 1808 | TTVQEESTVDSQVPVNDIHLTNIGRTGV SPGDVDSATS DSTSKSGSWGSGKDQYS RELLVSSIFAASRKRKKPKKAQPSSE DELDNVFKKENVEQCHNDTKEESKES ETLGRKQKIIAKENSTRKDPSTTKDEKIS LGKESTPSEEPSPPHNSKHNKSPILSCRF AILKESPRSLLAQKSSHLEETGSDSGTLL STSSQASLARFSMKKSTSPETKHSEFLAN VSTITSYSTTSSATYLA*PQLGSTP*GA VSAESKGDEADDERSELSIEGRPVETDS ESEFPVPTSLDFREAFPRKTAARSTKSSR RNSEGESELSCTEGLTSSLDSRRQLFSH KLIECDTLSRKKSARFKSDSGSLGDAKN EKEAPSLTKVFDVMKKGKSTGSLLTPTTR GESEKQEPTWTKIADRLKLPRAPADD MYE |
| 1115 | 9166 | A | 2063 | 2 | 527 | DPEADSIRAEMSRSVALAVLALLSLGLE AIQRTPKJQVYSRHPAENGKSNFLNCYV SGFHPSDIEVCLLKNKGRIKIEVHESDLS FSKDWSFYLLPYPTEFHPQLKDEYALP V*THVTLSPAQR*FKWDRGHVKQHGG LKMPHLGWNSDKFLLACFFNDMLITLT LLCTKM |
| 1116 | 9167 | A | 2064 | 3 | 163 | |
| 1117 | 9168 | A | 2065 | 611 | 1432 | TPHLHAVITNOPEIAEALLGAGCDPELRD FRGNTPLHLACEQGLASVGLTQSCIT PHLHSLKATNYN/GYVCLPALPHPLGGQ VTWRRGRWANLRSPGKSLNS*HLEG*E NMCAKCLLDAFIFQNPQDCGLFKFR* DYL FHKRIGERSEG*NRVVYFFPVLP HTCLHLASHIGYLGIVELLVSLGADVNA/ QGWCFLPPTH*VRLVLML*AEIPNAIS ISNSFWFQPCNGRTALYLAVDLPNDL VSLLLKCGADVNRVITYOGYSP |
| 1118 | 9169 | A | 2066 | 1 | 1332 | MVQLSPHYRGDSDEGRKRMVRQRTKPV LFWSDWLGNSPLTPPQNRNPAFIGRR GGAAEPTVRAAVPPASAPARKQRAAR GPAHPQORPQLVRAMFQAAERPOEWA MEGPRDGLKKERLLDRHDSGLDSMKD EYEQMVKELQERLEPQEVRGSEFWK QQLTEDGDSFLHLAIIHEEKALTMVEIRQ VKGDLAFLNFKTNLQQTPLHLAVITNQ PEIVEALLGAGCDLELDRFGNTVYLSL ACEQGCLASVGLDSSLAPPPQLHSLK GYPTTMTGHTCLHLAFYPMGYWGHRSF LVFLGVLDVKCSRPCKWPLPHHLAVD LQNPPEPGCSLFEESVADVQOSLPTQGY SPPTOPHPGPQAPRIQQQLGQLTLENL QMLPRE/SPDEESYDTRVQSSSTGVSEDE LAPMDDCGVFGGPRSDVMSAKGLKET |
| 1119 | 9170 | B | 2067 | 169 | 251 | XFQKEPYVIFPTGCVTQKGGVAGDAGW Q* |
| 1120 | 9171 | A | 2068 | 33 | 445 | |
| 1121 | 9172 | A | 2069 | 1 | 1428 | |

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| 1122 | 9173 | A | 207 | 263 | 525 | IKKVRNLGPKHPRFSVLLLVHVSCTNNGG VLL*RSSVPKKNKEEAEEYAKLLAKRM KEAKEKQEQIAKRRRLSSLRSTFKSES SQK |
| 1123 | 9174 | A | 2070 | 1268 | 2807 | LPLESLAVQVKQHIDAVARFTGIKNCFY GFGGMSOTQKPARGC*TRRPEIVVATPGR LWELIKEKHVHLGNLRQLRLCLVVDIA DRMVVEKGPFWLELLHSCFRDASNDISQ YNPKRTKRLFFLATLTLVHQAPARNPFH KKHTKKMDYTAQLADLLMQKIGHEGAS PKVIDLTRE*GPRWETLTETKIPL*DLIEK DFLLVTFTLMQYSRAAA*CFANSISCIKR LISGLLKVLIDIMALGPWHGLVWHQEG RGLRNLGSLPRIAEDCVLLATDVGGSSGV WDIPKVQHVHPFTRVPTSEIYVHRSW SNLLRSYQLTGLKS*LLIWGLKDVINFKK IYKTLKDEDIPLPRADINTWDVVKERI RLARQNEESEYRNQVACLHNSWJEA AAALIEIEAEDMY*GEGKA/DQOEERR RQKQMKVLKELRHLLSQPLTFESQKTK YPTQSGKPPLVLVAPSKERVCLSLCSQ GRKEEGRTKEARGGQPQGTATAKLVQVQ FNCPQGVQVQ |
| 1124 | 9175 | A | 2074 | 1 | 408 | SNPRVRGGGTHRSQGGAFAANMCRGGR MFAPT/KTWRRWHRRVNTTKRYAICS ALAASALPALVMSKGHRIEVEFPLPVV EDKVEGYKKTKEAVILLKKLKAWNDIK KVYASQRMRAKGKGR/RCGR*ERKEGC CWC |
| 1125 | 9176 | A | 2075 | 3 | 1434 | FPVAAAGLRGAWLSPLSAMACARPLJIS VYSEKGESSGKNVTLPAVFKAPRPDIIV NFVHTNLKNNRQPYAVSELAGHQTKA AE/SWGTGRAAGSKFPFVRGGGTHRSIG QGAFGNMCVRGGRMFAPTONLGRRW VRVDVTQNRVAVCSALAAASALTSNW VMSKGHRIEVEFPLPVVEKVEGLQEQ EPRKFLLLKKLKAWNDIKKVYASRR MRGGQRQNGETVRRIPGAGGPCIYNED NGNIKPFRRNIFQNYSA*M*AKLNILEALL PGHGGTFLAFTG*KLPRKLDDELYGT WR*S/RASPPQRSNYHSFPLHKIMINTDLS RNLEKPPQRSQAPPGHRCREDPIRRVL KKNP/LKNRIM/LKNPICKGPCCR/RHPF FAQAQESQSSGVDDKGLLHQHRLQAKS DEKAAVAGKQPVVGKTGKKGCLLVFK NQKKPLVGKKAATKPPAP/RS/LQRR NATTEKKPAA |
| 1126 | 9177 | A | 2076 | 275 | 652 | TVNLCSFTLWTVLVYFTFFAKCFQHILL RIYLR**LKTNSWFMVLAIMHLLVQG QN*NKIFSVKQIVLLCTFTYTGIFW*YHT KG*NKFTFM*NSMYIFGYLHLKPKGKI KRKHLFATTIC |
| 1127 | 9178 | A | 2077 | 63 | 290 | GGILLSISRPYKTKPTHGIGKYKHLKAE PKKKKGKVAVRAINLGTIDYNYGVLNIH LTVAYDMTLAESYAQYVHN |
| 1128 | 9179 | A | 2078 | 315 | 1092 | RPRSSKRMSTSEKVLCLRNNTIFKQAFS LLRFRSTSEKPIYSVGGILLSISRPYKSKP THGIGKYKHLKAEPPKKKKGVVRAI NLGTDYEVGLVNLHLYAYDMTLAESYA PLFSTTFCNSLSH*KSEESYAMPTQNHKK WLPVCRDQGPCKLLGLCLPHTHERV VQISGLSATFARKFSWKIIPKPLP*RESG LFS*REHTERTKTSRGRFORFDELGRFTW AKFEVATVDPFHCCQWWSYLSAKEKSL GS |
| 1129 | 9180 | A | 208 | 68 | 280 | |
| 1130 | 9181 | A | 2080 | 61 | 346 | LSLFFTEFCSCYPGLECSGVILAHCNFR LPGFK*FSCLSLSPSSVYRYPPPPANFL VLVETGHHVVGGLVNDPLIFNLDTCY |

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| | | | | | | SAKRQFLE |
| 1131 | 9182 | A | 2081 | 88 | 386 | PHRFGRNRNKTHTLCRRCGSKAYHLQ KSTCGKCGYPAKRKRKNYWSAKAKRP KYHPEPGMRHLKIVYVRRJQGMGFREG TTP*TOEGQAVASIQVHL |
| 1132 | 9183 | A | 2082 | 187 | 913 | STNKRSTRPPLGFEMASPHQEPKPGDLIE IFRLGYEHWALYIGDGYVHILAPPSEYP GAGSSGVFSVLSNSAEVKGRLJEDV GGCCYRGQQTAWDHGVPSPRALEG*SF SSAKEMVWFRRLKIVSIVSRNCEALCSP SLRYGQVPAVKQVKGPRFEVGVLATP LGILVVAGCSFAIRRYQKKSDSLKQFQN PVLEAAVGVPVEMSLPRCLQQDPDRALS QAFSRSFPLFPSLAGKSMI |
| 1133 | 9184 | A | 2083 | 1 | 423 | |
| 1134 | 9185 | A | 2084 | 2 | 390 | PRVRYRGVITDPQPLMEQPLGDSRYWL SSRLRVSATFWQNPNNHFRQCVQFYGLS ENDEWTHDRAKPVTOIVSAEAWSKADC GFTSGN*QQGVLSATILYEILGKATILYA VLVSALVLMGMVKKRDF |
| 1135 | 9186 | A | 2085 | 2 | 1027 | HLPDAAMGPQLGGYVVLCLLGAGPLEA QVTQNPRLITVTDKGDVPEGYKVSRRKE KRNFFLILESPSPNQTSLYFCARSEFQGY EQYFGPGTRLTVTEKRNFFLILESPSPNQ TSLYFCASSSSQGRSPGNFYGYTFSGST RLTVVEDLNKLFPPPEAVFEPSEAEISHT QKATLVCLATGUFPHDVLSWWVWNGKE AHSVGSTDPQLKEQPALNDSRYCLSSR LRVATFWQNPNNHFRQCVQFYGLSEN DEWTDQRAKPVTOIVSAEAWGRADCGF TSVKSQQGVLSATILYEILARGRPTLY CLCW*APLVLMAMVKEKGFPLKAALAV ELGAY |
| 1136 | 9187 | A | 2086 | 1921 | 1991 | SFVIFDANIFFQFIG*SLLSLWM*ALLCLL VTEHLYLVISGHLWCVCVCVCVCVY DFLIPSHSFIDCFKATYILRHIFVIFDAN IFFQFIGCLLILCFR |
| 1137 | 9188 | C | 2087 | 105 | 392 | |
| 1138 | 9189 | A | 2088 | 38 | 230 | LYWQKRKGKLLNNLTQGVADPVR*KK FHFKCPSPNCPKIHNTESA YAVSFMKYSA HVLGSLYEM |
| 1139 | 9190 | A | 2089 | 487 | 747 | |
| 1140 | 9191 | A | 209 | 465 | 1444 | KKGEKDYSWTDLITVPSPPGQKELARI GQTFPISLKKMMSASML*ESPLNKGGE T*GPKAPKIQRLVTPTCSSSPNGRIALK KQRT/TRKIKKRLQNNLNFVPRE*RLR RSARNKLRRDADFLCELLLLWPCPAT E |
| 1141 | 9192 | A | 2090 | 1 | 1350 | |
| 1142 | 9193 | C | 2091 | 179 | 649 | MFLLVGAPKANITQPGIVEGGQVLKCD WSSTRRCQPIEFDATELHIRELKENQHS YSLKSSASFNVIEFPYKNLPHEITNSTLV TTNVTWGIQAPAMPVFPVWVHILAVLAGL LLLAVLVFMVYKMGFFKRVPRPQEEQE REQLQPHENGEGNSET* |
| 1143 | 9194 | A | 2092 | 274 | 423 | |
| 1144 | 9195 | A | 2093 | 1 | 3849 | MCGGVFATEELAVSAGLKRKMCVSEK RHGDFQVELLLDKLKQKAIRRALFLYS RSPSHSKNMTISRGGMLMQCELIAYLRD ESEFRDKLTPITIFMEYRLDYRTAADTTG LQPIILNQFTANISRSQSGFVLLTCSQDKKI YIGDDNPLTLIVKAQNGEGEYAEELIVS IPLQADFIGVVRNNEALRLSCAFKTEN QTRQVVCDLGNPMKAGTQHLLSPCTQF SMQVFLPHYTASSSVVALDSHRSKPYCV N |

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| 1145 | 9196 | A | 2094 | 1126 | 2034 | RCWRPRTLGFASPPTRPCSPTHAPGCEM TPRDVHVRVLSFASPLRIEIEFQGYDKTPG LKNKKGAQKQKFIKAVTHQVKFGQ/SKS TSGST*SWKRKLKDDKKELQELNEL FKPVVAAQKIRVKGADPKSVVCAFFPKQ GQCTKGDKCKFSDHDLTGEKMEKRSVY IDARDELEKETKSSLIQADTMNDWDEK KLEEVVNKKHGEAEKKKFKTQVCKHFL EAIENNKYGFWVWCGGGDLCMYRHAL PPGFVLKKDKKKEEKEDEISLEDLIERER SALGPNVTITLESFLAWKKKRQV |
| 1146 | 9197 | A | 2095 | 1 | 213 | |
| 1147 | 9198 | A | 2096 | 2 | 170 | |
| 1148 | 9199 | A | 2097 | 3 | 764 | PAVVCGRRLLISVLEQIRHFVMMPEINTN HLDKQQVQLLAEMCILIDENDNKIGAET KKNCHLNENIEKGLLHRAFSVFLFNTEN KLLLQQVRSDAKVTFPG/LVLRNTCCSHP LRQSSRALRESDALGS*GARQHRGRLES LSLGIFLEEVPEELII*HRIHYKAQSDGI WGHEIDYILWVRKNVTILNPDNPEIKS YCYVSKEELKELKKAASGEIKITPWFKI IAATFLFKWWDNLNHLNQFVDEHEKIYR M |
| 1149 | 9200 | A | 2098 | 1 | 299 | GIPDQEVIGTGYGILDQKASGVKYTKS/D FRSPRPDDLSSFQ*VTSHWDLRLIEVTE TICKRLLIACITRRGPAIDLPACQRP RHYTTWYTKGSRW |
| 1150 | 9201 | A | 2099 | 1 | 631 | MDSMPPEPASRCILLLPLLLLLLLPAPE LGPSQAGAEENDWVRLPSKCEVKYVA VELKSAFEETGKTEVIGTGYGILDQKAS GVKYTKSDRLIEVTEITICKRLLIACITR RGPAIDLPRLDSGLSFIRSGVRPACILVC LLVHRQKCSTVAAPVGT*RH*NGENSAR STMCRKVG*ARCQRTPRACQRPRLHY TTWYTKGSRW |
| 1151 | 9202 | A | 21 | 918 | 1872 | AEKGPPSPGVSTCLANSPPSPAGSAAV PHSAPPGAAPRRSSRQRPSPRCWQEG AGVRAQDGLGSGATRSAAQSHQROT GP/EGSTGKAKARGSTGRKR*AMGGSAA GDGA/PHVLGTGQFAPPSTGDGARAG NWLQGSAPTHRRWSTCWEPASPLPA SSNCCTHTWTRNCPGTAPSGTALFGLPG RPAPHPEPPPPMPPP/PPRPL/PLGSCVF L*VERPIWREVLVSPAPPACVDTSGEH ASGPSVPVAGTEPSRPWLKQPLPCPPQOP RSWLTRRPE/AELHMPPTLPAYLPQSG VPOSHS*PPATLLR |
| 1152 | 9203 | A | 210 | 87 | 904 | GGWVAPETPSDPWFVQVQGVGDASVPG IGKNVCEKAATSVDAFRMVTASRYYP QLMSLVGNVRLRFLFAFVRMKQLISEHYV GAVMICDARIYSGSLLSFSYGWFC/DEL MGGGGLHTMGTYILDLLTHLTGRRAEK VHGLLKTFFVQNAAIRGIRHVTSDDFCF FQMLMGCGVCSVTILNFMFGAFVHIEV MVDVPLLYLKGMYVMVQALRQSFQGO GDRRTWDRTPVSMASFEGLYMQSVV DAJKRSSRSGEWEAVEVLTETPDNTQNL |
| 1153 | 9204 | A | 2100 | 171 | 825 | RANPTKPGICAVRGPSWALKAGCGCQR RAGRLAVVVVARRHVCSPGSGEKKLL RARFREEPPGLSGPGRAMDSMPPEPA SRCLLLPLLLLLLLPAPELPGSQAGA EENDWVRLPSKCEVKYVAVELKSAFE ETGKTEVIGTGYGILDQKASGVKYTKS DLRLIEVTEITICKRLLIACITRRGPAIDL PRACQRPRLHYTTWYTKGSRW |

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| 1154 | 9205 | A | 2101 | 2 | 527 | PGRAMDSMPPEASRCLLLPLLLVMLVL LPAELGPSQAGTDENDWVRLPSKCEVC KYVAVELKSAFEETGKTKEVIGTYGIL DQKASGVKYTKSISDPDQDLSFQL* VTSHWDLRLIEVTETICKRLIIACTRRG PAAIDLAKVGFIVLHPLWGPGLQCNLS VSAGL |
| 1155 | 9206 | A | 2102 | 3 | 1203 | SSAAEAMRVLVRRVCWGPPLAHGARRR PSPQWRALARLGWEDCRDSRVREKPPW RVLFPGTDQFAREALRALHAARENKEEE LIDKLEVVTMPSPSPKGLPVKYAVQSQ LPVYEWDPVSGSEYDVGVAASFGRLLN EALILKFPYGILNVHPSCLPRWRGPAPVI HTVLHGDVTGTVMQIRPKRFDVGPIL KQETVPVPPKSTAKGIGKAVLFKDWGA NMLLSVLEKFGLESNGRQQPMEGAT YAPKISAGTSCIKWEBQTFEQKFRLYRAI GNIIPLQTLWMANTIKLLDLVEVNSSVLA DPKN*REQALIPGSVIYHKQSQILLVYCK DGWIGVRSVMMLKKSILTATDFYNGYLIHP WYQKNSQAQPSQCRFQTLRLPTKKKQK KNCCYATMH |
| 1156 | 9207 | A | 2103 | 3 | 215 | |
| 1157 | 9208 | A | 2104 | 2 | 341 | SKPFSLOETYEAKRNEFLGKQKEEEM RQMFVQRVKEKEA/ELKEAEKELHEKFD RFKKLHQDEKKKLEDKKSLDDEVNPF KQRKTAELLQSQGSQAGGSQTLKRDK EKKN |
| 1158 | 9209 | A | 2105 | 1 | 130 | |
| 1159 | 9210 | A | 2106 | 2 | 3449 | |
| 1160 | 9211 | A | 2107 | 2 | 1609 | FVPPPFVEAYGWGCRKNWNWAGHRGK RRVKSAPSPYPTFKGWAVEGRGLGLEQR GGPSLAPPPTGLGRARSVTLSCRRSSSV SCAVAPVAAAAPVAALADAGAMAATDIS RQVGGECRTVPLAGHVGFDSLQDLVN KSVSQGFCFNILCVGETGLGKSTLMDT LFQHQISKGEPAHTHQPGVQLQSNITYDL QESNVRLKLTIVSTVGFQDQINKEDSYKP IVEFIDAQFEALLQEDPKVRVRLQTYH DSRIHVCLYFIAPTGHCLKSLDLVTMCK LDSKVNIIPIAKADAISKSELTFKJIKITS ELVSNVQIYQFP(TDDESVAEIQLNP*TP HLP*FAVIGSTEELKIGKNMMRARQYPW GTVQVENEACDFVKLREMLIRVNMD LREQTHTRHYELYYRCKLEEMGFKDDTP DSKPFSLQETYEAKRNEFLGELQKKEEE MRQMFVQRVKEKEAELKEAEKELHEKF DRLKKLHQDEKKLEDKKSLDDEVNA FKQRKTAELLQSQGSQAGGSQTLKRD KEKKN |
| 1161 | 9212 | A | 2108 | 1 | 618 | |
| 1162 | 9213 | A | 2109 | 1 | 427 | HPVRFVHRGPH/VDFSLEVSQWYELV VFTASMEIYGSAAVDKLDNSRILKRRY YRQHCTLELGSYKDLSSVHSDLSIVIL DNPSGAYRSHPDNAIPIKSWFSDPSDTAL LNLPLMDALRFTADVRSVLSRNHQRH L |
| 1163 | 9214 | A | 211 | 217 | 624 | GDELVKREAGMKMLPGVGVGTG/ELPP EVLVPLLRAEGFTVEALWGKT*GGRRK ALLKEMNIAPHTSRTYDILLHQDQDVLVC ISIPPLTRQISVKALGIGKNVCEKAATS VDAFRMVTASRYYPQLMSLVGNV |

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| 1164 | 9215 | A | 2110 | 2 | 835 | WNSAELGRGGPGAGGAGVIGMMRTQC LLGLRTFVAFAAKLWSFFIYLLRRQURT VQYQTVTRYDILPLSPVSRNLQAQVKRKI LVLDLDETLJHSHHDGVLRTVRPGTPPD FLKVVYDKHPVRFFVHKRPHVDFFLEVI VSQWYELVVFVATSMIEYQISAVGRNLW DNSRSIL*GGRYVYRQHCTLELGSYIKDP LLWPHRDL SIGVILADNSPGAYRSHPGY GGRIDNAIPKSVSVTSPD TALLNLLP MLDALRFTADVRSVLSRNLQHRLW |
| 1165 | 9216 | A | 2112 | 2 | 846 | RFPLGCFPAQEPQGPVGMGAPAGNG HGS*SPHFHQGTGKRAALATWPNQAP ERSPDVKAPAKPRARRIAPRPRGVPIRP IVRCPTVRYHTKVPRPGRFSLEELRVA GIHKKIVARTIGISVDPRRRNKSTESLQA KRAAG*REYRSKLILFPQRSPRAPKKGDS SVAELKLAHPG*PGPGHAPSPTVYKKE KARVITEEEKNFKAFASLARMARANAPA LSAYRAKKS PRKPKQTDVEKPTIKPCLG TWNQSGSHAGSPRGVFRGNNAWDGA SLL |
| 1166 | 9217 | C | 2113 | 714 | 1010 | MKSLNPHLDKIFPHKPLSSLASPSKTLVP GHLCDSTPFPKSPNYLLFPQNHPTSPH LPSPPKDKGISPIYTPHCLGGVITILCMH FYRFVCHLSY* |
| 1167 | 9218 | A | 2114 | 2 | 227 | ERFRPPIARVIDVSNKGVHVAE/SCLEET GGLGVDIVLDAGLDPPDSHCLFLKGATL AFLNDEVWNLNSNVQGRYL |
| 1168 | 9219 | A | 2115 | 3 | 487 | |
| 1169 | 9220 | A | 2116 | 1 | 489 | |
| 1170 | 9221 | A | 2117 | 2 | 221 | |
| 1171 | 9222 | A | 2118 | 353 | 512 | |
| 1172 | 9223 | A | 2119 | 1 | 1706 | MPRAAIAQTAPTPAPAAAARGPGRRLA ALSSPHLRAAEHDGRCSSETGCHIGVLD LASPTPPFRSDERPDQWEQAGSLTKDW KVA VVKVQAVGAAQRQVSPGKRVLC GKRAFKRKRVERCPTPCSPGEDGGSRR LTWDLFGPRPSLAEAAEGHFFLPHFAV PGKQLVVIRCMWLLSQIGFLHYAKRRN HLERDVMTKGLYFQSSDDEITFPVQE KEDLPVTEDNFVKLQVKACALSQINTKL LAEMKMKKDLFPVGREIA/GIVLDVGSK VSFFQPDDEVVGILPLDS*KTPGL/CESL LRVHEPLLGFINPEKVTWTEAAGSISGM GVRAYYSFLHLSFFIFSPGGNQCLIMDGA KCHLRTIAIQLAHHRGAKVISTACSEDK QCLERFRPPIARVIDVSNKGVHVAESCLE ETGGLGVDIVLDAGVRLYSKDDEPAVKL QLLPHKHDITLLGVGGHWVTTEENLQL DPPDSHCLFLKGATLAFNLDEVWNLNS VQQGKYL*QSFLRILKDVMEKLSTGV FRPQLDEPIPLVEAKVSMEAVQKNQGR KKPSWFQF |
| 1173 | 9224 | A | 212 | 858 | 992 | LKSPQPRGMVAHACNHS TLGARGGWIT/ R*GQEFKTS LANMAKFHL |
| 1174 | 9225 | A | 2120 | 230 | 535 | |

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| 1175 | 9226 | A | 2121 | 344 | 2631 | GDREGTGRAHTEEGAGAGMHFYDVEG VDWDRVQGRPMRGLSSSQVQGRPPAPK VSGPLSICVVRQLGLASSRFARSVPFGV WKKDLPCLSLLSQSEDLTPFDMISQVR LPFNLRQI*KQYWLGMVAHAHAGTEKDK NSVNFKNYVLQELDNPGQ*YFKISFLI YENISTLIKEDMGHGSDSLSEVLWVCA NLFSVDQFKMSHKRIMLFTNEDNPHGN DSAKASRARTKAGDLRDTGGHISPFQ*IG T*LLFFYFLFF*HISIAEDEDLRVHFEESK LEDLLRKVRAKETRKRLSRALSPGQL PTLPLNQKQAGRGGFKPPPIKLRYETNEP VKTCTRTPNTSTGGLLPSDKRSQVGR DAFCCCCP*DRVSLCRPGWRGLMLMGF KPLVLLKKHHYLRPSLFVYPEESLVIGSS VDHG*VTLTHSAVYGAALCRYTPRRNIP PYFVALVPQEEELDDQKIQVTPPGMWQ RYFQGF*TLPILVNHPWTPQGGGTVRLA LDVSKKLETGTNCRQVKGWGLVNTGRN SKYRRAATTVLLSAVSVTHSATPEQVW GKMAIIVEKPRFTYRSDSFENPVLQOH FRNLRAALDLMEPEQAVDLTLAQCS Q*IKRLGSLVDESKGASLPQPDYNPEGK SYPKRKNTNK*KGLGKKRKPWK*FK KEGA*RPHIKGVWRGKWHCAPC*KEA CRGLRG*KSLGKVKQELLEALTCHKPPGL DQRPAPALPAVLPFGPCGLVLSQLKCV SPELGRVYPT |
| 1176 | 9227 | A | 2122 | 599 | 1063 | SCSEGLNAVNNLKASRKPCKLSLKWFLF FYFP**IDSQAFYPLISKIVRKMTHF W TLYFMYLFLRQSLALLRPGWSAVAQSQL TVALGLL/VLRQSSVSPPGTWNHRYMP PCPAF*NYFCRDGGLPILFRLVNSWV* A VLSRPLKMLRLQA |
| 1177 | 9228 | A | 2124 | 142 | 461 | |
| 1178 | 9229 | A | 2125 | 145 | 904 | VINLVYLSSRPPELKPVDKESEVVMKFP DGFEKFSPPILQDEVDYFDPKHVIFSR LSVSADLESRICVVGENGAGKSTMLKLL LGD LAPVRGIRHAHRLNKIGYFSQHHV GAAGT*TFSACGNLLGTQVFLGRPEEY RHQLGFGMGISGELGHASSLACLGGO K EAEVAFCSDDLPCPNFLVLDDEPTNHLG HGRAIEALGFCLOTISGVGVILVSHE*SA LSRLVCRELWVC*GRRRHPCGKEG |
| 1179 | 9230 | A | 2126 | 39 | 2220 | GASFGVPEWNMATCAEILRSEFPEDGQ VFDYVTGVLHSGSADFESVDDLVEAG ELLQEVSGDSKDDAGIRAVCQRMNTL RLAEPQSQGNSQVLLDAPQLSKITENYD CGTKLPGLLKREQSTVNAKLEKAEAR LKAKLRKSEKDTLKTSNPLVLEASAS QAGSRKESRLESSGKNKSYDVRIENFDV SFGDRVLLAGADVNLAWGRRYGLVGR NGLGKTLLKMLATRSRVPAHISLLHV EQEVAGDDTPALQSVLESDSVREDLRL RERELTSQIAAGRAEGSEAELA/KIYAK LEEIADKAPARASVILAGLGTPKMQ QPNPGVSQVAWRMLALAGALFARPD LLLLDEPTNMLDVRAILWLENYLTWPS TILVSHDRNFLNAIATDIHLSQRIDGY RGDFETFIKSKOERRAQOOREYEAQQ YRQHIQVDFRFRYNANRASQVQSKLM LEKLSLKPVDKES*VVMKFP*WV*EAL RRPFCSLDEVDYFDPKHVIFKRLSVSA DLESRICVVGENGAGKSTMLKLLGD LAPVRGIRHAHRLNKIGYFSQHHVAA WT*TSVLVELARKFPGRPEEYRHOGL RYGISGELAMRPLASLGGQKSRVAFQ MTMPCPNFYLDPTNHLDMETIEALGR ALNNFRGGVILVSHDERFIRLVCRELWG |

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| | | | | | | MRRRRVTRVEGGFDQYRALLQEQRRE GFL |
| 1180 | 9231 | A | 2127 | 45 | 339 | PPRTPSV*PAG*LRAS/STPPRSSSSSSSSP RKGLSLRPQALPPPPCPSRSSAPSAPR GGRGETPNKGTGSLCQSCHHPPVDVQ AVLNKCFEADE |
| 1181 | 9232 | A | 2128 | 484 | 1879 | FQORMAGELKPCSNLLEQSILLAKGTS/ GSSLTALISQVLKAP*VYVFGELLELCNV HELAE*ANAAAYLQLLNLFAYGTYPDYIA NKESLP*LSTAQONKCLKHLTIVSLASRM KCIPYSVLLKDLEMRNLRELEDLIEAVY TDIIQGLDORNOLLEVDFCIGRDIRKKD INNIVKTLHEWCDGCEAALLGIEQVLR ANQYKENHNR/TLQQQVEAEDVYILPOS GNDCRGLRFVSSLIGGVRVCVHLKHKG AVVWEAIEEGEALPGKYRLKGGRSVWA AAVRAVCMDOVTNIKKTLKATASSAQ EMEQQLAERECPPHAEQROPTKKMSKV KGLVSSSPLGPAGAAATHQAWVRWGG DTKGPPPLSTCSEFOTCPSPHORLPTLL VLFQKNCYSPSPTPSPSCSLQTOGLHOC HPKGTGSDTAQLPSRRFLSLCKGLVSLPVF LLLPRHFVRLVISRRQL |
| 1182 | 9233 | A | 2129 | 225 | 413 | |
| 1183 | 9234 | A | 213 | 1 | 126 | FRAWTRSRERRRRKRSSSSGSEKFD K*KKNSRRKKQHEE |
| 1184 | 9235 | A | 2130 | 356 | 1024 | GRAEPDELENGESSAELDYQDPDATSL KYVSG*CHPPSGWG/HEDALIVHCVDSD GHWGRGGLFTALGKA/SPKPKIYELA GENEKTLSLGGVLLFPV***KIQDTKOKI CW**LWLSIVNRNSVLSGI*DGSPIRRA* RRY/CLAAKAGKSSVQPPHVLDMPRK GFKRVGPPEPTLFGKHGPGLRGHPQPYH ILFPLEGKSACPFHSQFFILPSLKDSWCP |
| 1185 | 9236 | A | 2131 | 3 | 205 | |
| 1186 | 9237 | A | 2132 | 3 | 205 | |
| 1187 | 9238 | A | 2133 | 1 | 428 | |
| 1188 | 9239 | A | 2134 | 36 | 417 | QAFRRKFLPLFDRVLVERSAAETVTKGGI MLPEKSQKVLQATVAVGSGSKGKGG EIQPVSVKVGDKVLLPEYGGTKVVLDDK VCKP**F*KEVRYLQLVLTNGFFHLQD YFLFRDGDILGKYVD |
| 1189 | 9240 | A | 2135 | 496 | 751 | ISLKNKHSFFKGGEIOPVSVKVGDKVL LPEYGGTKVVLDDK/DV***F*KEVRYL QLVVSTKGFFHLQDYFLFRDGDILGKYV D |

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| 1190 | 9241 | C | 2136 | 92 | 265 | MSLVHIFHIKGEIWEITYMTERISGTSSGM GRHHVDAINSDLFQSTVLSKNCNNL* |
| 1191 | 9242 | A | 2137 | 330 | 875 | AYAAAGFGDSCLIAMSGRGKQ*GKVFIAK AKSRSSRAGLQFPGGRVHRLRKGNYA ERVVAGAGPVVYLAALVLEYLTAEILAE GNAARDNNKTRHPRHLQLGHPATTEEL NKL*A*GRVTICFRGGVPS*TSRAVLPLK KTESSPQGGQSDFDRLVLEPRKRYSNP KGSFSEAPLPQKRS |
| 1192 | 9243 | A | 2138 | 25 | 414 | |
| 1193 | 9244 | A | 2139 | 1 | 65 | RTRGRTRGNLSF*NHM*QIA |
| 1194 | 9245 | A | 214 | 90 | 943 | SPLADTFLSSGLGRTASPRPKAEARGTGR VRGLRRRAVSRPGRMGRSRSSSRSSKH TKSSKHNNKSRSRSRSDKERVRKRKSK SREK*UNRRNESRSRSST/RHWPCCGAS GTGSAPRPRPTASTSSGARRASAGSLDE KQKARGGGEGSGVPSGSEKFDSSK*KKN SSRKKQHHEE*KNW*QKRVEELEKRRDE IEREVLRRVVEAKRIMEKQLLELERQRQ AELAAQKAREEERAKREELERILEENN RKIAEAQAKLAEQLRIVEQRKIHEER MK |
| 1195 | 9246 | A | 2140 | 293 | 444 | SPSGYGR*SEASRRPTWCSQFLRQPPHP EPKKSATWNQTPNIGNLSLFL |
| 1196 | 9247 | A | 2141 | 544 | 1553 | CQMRSCDRTECSFTTARICLSPFLTAFRT HTYGPKSCSRPACDVLGKGRSCRGWL RLASAWCSCARVSAGSALRFPMESEM ETQSAGAEFGFTQVTRKGGRRAKRRQA EQLSAGGEGGDAGRMDEEARPAKRPV FPPLCGDGLLSGKEETRKIPVPANRYTPL KENWMKJFTPIVEHLQLQIRFNLSKRN EIRCTKETKDVSDDKQRTDFVKVAFILG LSGWKE*HLTLIRLDDLFESFEITDVXK LKGADHLSRAIGRIA/GAKEGKTKFTIE NVTRTTIVLADVHVHILGSFQNKIMARTA ICNLILGNPPSKVYGNIRAVASRSADRF |
| 1197 | 9248 | A | 2142 | 1055 | 1223 | SSPGNLNVQEGFRITGLICY*QYQY*MC FLFL/SLYVCVVFDFLLLLFCQHPLH |
| 1198 | 9249 | A | 2143 | 2 | 256 | SPGRTAMRWSWCRPCGGGGLG/SSQGRS EPGSSRLGPAPS/COLTHPCRRGPSCP PACGRTCCGICPGPHPTSRCPSPRNCQQT |
| 1199 | 9250 | B | 2144 | 1 | 2848 | MARRPRNSRAWHFVLSAARRDADARA VALAGSTNWGYDSGDQLQVTLCLSLTG SWLWDAGVPAGSAVDFDTCAACPVS PNGPAVCCGQEHSDSDPEYSTLPSPSAV PVTGESFCDCAQGSASFCSLHSAHRG RDCRQGEDEYDFWVWDDLNKSSATLL SCDNRKVSFHMEYSCGTAIRGTKELEGE GQHFWEIKMTSPVYGTDMMVGHGTS DVLKRYHTFCSLGRDEDSWGLSYTG LLHHKGDKTS |
| 1200 | 9251 | A | 2145 | 3 | 630 | RSGGSASSGRAEARDCWGRRSLPGDR TLEPCGCGNCSGSPACCVAPA*GPAA AADPPACPLSLAAAGAGGGSTGTGGK/C AGTG/GG*PSCCSGPPWSTPSGRIS/C CSLVAATPGREGPSLYTSCS*KR*VCRARCP GARQ*WSPGRTATRSWSCRPCGGGGPC RRGPSCPHPCPAGCRTCGGICPGPHPTSR CPPSCRCRRRRERS |
| 1201 | 9252 | A | 2146 | 16 | 716 | SVLESKGQRNKQGRKGPVPAQEGSSGT KSVRSGGASLWQGGQGSRTAGVGGGRC PGDRTEPCGCGNCSGSPACCVAPA*GPAA AADPPACPLSLGRS/CAGGGSTGT GGKWRWHRS*PSCCSGPPWSTPSGRIS C/CCLV/CCHTY/ITSCS*KR*VCRARCPG ARQ*WSPGRTATRSWSCRPCGGGGPC RRGPSCPHPCPAGCRTCGGICPGPHPTSR CPPSCRCRRRRERS |

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| 1202 | 9253 | A | 2148 | 123 | 488 | LKCNFRLDKYCGGTAMSGGEQKPERYY VGVVDVGTGSVRAALVDQSGVLLAFADQ PIKNWEPQFNHHEQSSSEDIWAACCVCH KGDShRNVIMWLDHRAVSQVNRINETK HSLVQYVVGVMVSVE |
| 1203 | 9254 | A | 2149 | 2 | 321 | |
| 1204 | 9255 | A | 215 | 739 | 857 | IPSPNSNKLNP***PGNYY*YFNITQI NKDNVYTE |
| 1205 | 9256 | A | 2150 | 257 | 565 | INKDPIFVPGVWGPYFSAIMVPGFWLNE GGQSVTGKLDILSTNTPHITLGNSTNII KTQLQHOKPFLITSPHPIKTPQTSRTDQA SFLCSFSDSLQILSL |
| 1206 | 9257 | A | 2151 | 1 | 291 | VADLTGKGMVTGLKLFQDLEYLAILYLA TVQAIALGTRFIEAMEAAAGHSISTLFLCG GLSKNPLFVQMHADITGSGNGKNEQSW SCVPETTG*KIL |
| 1207 | 9258 | A | 2152 | 1 | 1690 | PRDDPRVRAIRAESVYLKFNRLDKYC GGTALSGGEQKPERYYVGVVDVGTGSVR AALVDQSGVLLAFADQPIKNWEPQFNH HEQSSSEDIWAACCVTKKVQGDILNQI RGLGFDATCSLVLDKQFHLPLVNOEGD SHRNVIMWLDHRAVSQVNRINETKHSV LQYVGGVMSVEMQAPKLLWLKENLREI CWDKAGHFDDLDFLSWKATGVTAARSL CSLVCKWYSAEKGWDDSFWMIGLED FVADNYSKIGNQVLPPGASLGNGLTPEA ARDLGLLPGIAVAASLIDAHAGGLGVIG AHRVGHGLHL*GAASDVTLAVICGTSS CHMGISKDPIFVPGVWGPYFSAIMVPGF WLNEGGQSVTGKLDILHMVQGHAAFPQ QVKATARMPEYILHI*TVTWDL*GRVQ PVGFSTV*FYMFGPFDHGNRSLADLT KGMVTGLKLSQDLDDLAILYLATVQAIA LGTRFIEAMEAAGPL/ESSTLFCGGLSQ E/YPLFVQMHADITGMPVVPVARGGSPF LCGAALVGACASGDFASVTTEAMAKMS KVGKVVFPRLPE |
| 1208 | 9259 | A | 2153 | 1 | 479 | AATSWGAAQTISPILDKSLPADISIEDQ CLVFRDVAQAPVHFLVIPKCPFRISQA EEEDQQLLGHLLLVAKQTAKEGLDG YRLGE*LLALGPSPMNSHSYFSI*SSFFDL CHDPDSLTPSSISVINDGKLGASQSVYHLH JHVLGGROLQWPPG |
| 1209 | 9260 | A | 2154 | 284 | 604 | RERRDIGCWSSSAWGNPREWGLFN DOGRCTGSLRGPTREHKTLAGPHKRIV SWGSCPRIRGEDGWGCSPRS WL AGAL ATFIP*KAPFPRIPTG*RRRPAATYVPPLS L*LGLHLTPMWLSRQQLRLGLGDGYRL VINDGKLGAQSVYHLHIHVLGGROLQW PPG |
| 1210 | 9261 | A | 2155 | 496 | 1579 | NCLNSFSCSMNQMYLLIALMTIEYNLAY DSYIYIHFIFKIVYKLTDFLQMLR*ILM QIFW*GSLFL**FQILRDLPAFASLR*KL CPHLLKYKIGLWKQHLVLC*R*ILILMC DLFALSGLHFLSFIMRKFSHL*VTVKFIY MSIPRRPVQIL*EHLGLQDIHILISCY** ENRYSIVPLF/CF/VILITHFGFSLF*I*LL VFV**F*FNPNQYI*FICFLSNLTFFFL CFLVGG*CFVKGIH*DHCFHTCFTLHV *STFIY*APGLE*FQOMTFW*FVMSSSN CYTLGT*QICKGRNNFLYSANLFI** IHFLLKIVWIDCF*NTNLWLWFFSSAFP ASK |
| 1211 | 9262 | B | 2156 | 302 | 451 | XEFLKHPKRTATLSMRNTSMVKGKGF SAEFLKVFPLSLLSHLLAIGLG* |

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| 1212 | 9263 | A | 2157 | 1 | 765 | PPLSPGAHVGRGAPTSAFPFPAAEAHPA ARRGLRSPQLPSGAMSONGAPQMJEES LQGSWVELHFSNNNGNGSVSPASVSYNG DMEKILLDAQHESGRSSSKSSHCDSPPRS QTPQDTRNASETDTHSIEGKNSQSEED DIERRKEVESILKKNSDWWDVSSAGKI FPPKEFLFKHPEAARPTLQA*GNRAVMK KGGIFSA/ENFLKVLPLSLALSHFAGPSG LGVYIGKGVLTITSTFWMKELGVLTLV R |
| 1213 | 9264 | A | 2158 | 1 | 381 | |
| 1214 | 9265 | A | 2159 | 2 | 312 | |
| 1215 | 9266 | A | 216 | 263 | 425 | FA/QKFYIYTYF*KHTL/WLGAVAHGCN PSTLGGQGGQT*DEEFETLLDKMVK |
| 1216 | 9267 | A | 2160 | 1 | 576 | |
| 1217 | 9268 | A | 2161 | 2 | 313 | VSYYHFHRMEKAHPPEGTWDSFLEKFM AGE/VWA*LEEGGCEAEGWWL*RTATL CRCLPASLVSYGSWYQHVGWVWELSR THPVLVLFYEDMKEVRPTVMLPPM |
| 1218 | 9269 | A | 2162 | 901 | 1848 | RRNMELIQDTSRPPLEYVKGVPLIKYF AALGPLQSFQARPDLLINTYPKSGTT WVSQILADMIYQGGDLEKCNRAPIYVRV PFLEFKAPGIPLRMETLKDTPAPRLIKS HLPLALLPQTLLDQKVKVYVVAQRKR SVAVSYYHFYHMAKVHPEPGTWDSF LGESSLV*KVVLADSWYQHVGWVWEL NRTHPVLVLFYEDMKENPEKGRFOKDP WSLGGRLSQEKTGDFQVQHTSFKEMK KNPMTNLHPTVPPGSSMDHSISLP*GK GMAGDWKTITTV AQNERFDADYAEK MAGCSLSFVSESL |
| 1219 | 9270 | A | 2163 | 3 | 287 | |
| 1220 | 9271 | A | 2164 | 75 | 301 | AHKLRAAPLAPMTGTH*KVVFVKAGD KVKAGNPSWVMPMKMEHIKSPKDG TVKKVYFREGAQANRHHSFVS |
| 1221 | 9272 | B | 2165 | 63 | 368 | MKGGRSPASPAKADGSHCDPKTAPKAK EAPAPPKAEAKAKALKAKKAVLKGVS HTQKRRSACHSPSGGPRHCDSGGSPDIL GRAPPGETSVATMLSSSKFR* |
| 1222 | 9273 | A | 2166 | 153 | 370 | LIAGAFRKASGGNNIFRRPKTL*LRRQPR *PQKSTPRRNKLGHYAIKFLPTTESAVK KIEETNTLVFTVLV |
| 1223 | 9274 | A | 2167 | 842 | 1770 | CTPEKCLPAVHRRNWLNAEPPVWKRH LSPICRKRQGRATPKPRFWYTPPTRR VRDVALRPSYRHRGRQPHAKKKIRMSLT FRRPKTLRLRQPRYPRKSTPRRNKLGH YAIKFLPTTESAVKIEETNTLVFTVDV KANKHQIRQAVKKLYDSDAKHTERR HDEQNILITREAKNRNDNTNRARTETN TETQKNSGYQALISFHSYYSDSDNKAH LVSYSGQCTYDRLGWLLIRMTCSRL QHTYDIQSTQIASCFHPVSVRNLRLYC ANYGGISAVFMLRKLLELITRSSNSKVS QLRI |
| 1224 | 9275 | A | 2168 | 3 | 281 | |
| 1225 | 9276 | A | 2169 | 353 | 605 | EMAPKAKEAPAIHPKAEAKAKALKAKK AVLKGVSHT/KEKKIRMSLTFRRPKTLR LRRQPRYPRKSTPRRNKLGHYAIKFLPT T |
| 1226 | 9277 | A | 217 | 2 | 660 | FVTRPDAGVMRLP.VLLAVLLAVLCK VYLGVLGSGSSNPFSEDKRPPAPLVTDK EARKKVLKQAFSANQVPEKLDVYVIGS GFGGLAAAILAKAGKRVLVLEQHTKA GGCCHTGKNGLEFDTGIHYIGRMBEGSI GRFILDQTEGQLDWAFLSSPFCIMVLEG P/KWPKGVPHVQWRESLHSPQG/GSFH RRKLSLTS*SWLRWYVPELMPSC |

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| 1227 | 9278 | A | 2170 | 301 | 946 | PGSYLKPLSWTVALSLRPGFMSRWPCOR LTWQRSSVTQASGASGASLCASRLPRDK TAPKAKEAPAPPKAEAKAKALPKKAAV VERCPHTIAKKRRMSPTRPRKTLRLR RQPRYPKSTPFRNKLGHYAIHKFPLTTE USAGKJNKKNNTPLVHCGC*RPTRHQIR QAVKKLYDSDVAKVTTLICPDKEKKA YVRLAPDYDALDVANKIGII |
| 1228 | 9279 | A | 2171 | 1 | 1602 | |
| 1229 | 9280 | A | 2172 | 243 | 620 | LLTSKVMNLSLLEVFS/VSSSQSPSPGP NIHTSSNASNATVVPQNSSARSTCSLTP ALAAHFSENLIKHVQGWADHAEEKQAS RLREEAHNMGTIHMSEICTELKNLSLV RVCEIQATLREQR |
| 1230 | 9281 | A | 2173 | 3 | 688 | QRSFLRVVPQSPPLQLQDPNLLRQLPAL QATLQLNNSNV/DISKINEVLTAAVTOAS LQSIHKKFLTAGPSAFNITSLISQAAQLST QAQPSNQSPMSLTS/DASSPRSYVSPRIST PQNTVPIKPLISTPPVSSQPKVSTPVVKQ GPVQSQATQOPVTAG/PGPRS/SEPVSPPR SSALK*PEKSITWVPHTSSNSNGIMAT VVPQEFFLARSTCSLTAGTSSTLQ |
| 1231 | 9282 | C | 2174 | 1 | 1038 | MEDFTTLPSTLASSMRQKVNKDQDLDS ALQQADVIDIYRTLHPKSTEYTFFSALHC TYSKSDHVIGSKALLSKCKRTEITNCVS DHSIAIKLEFRIKKLTQNRITTTWKLNNLL LNDYVVDNEMKAEIKVFETTQHDQNF TKARCIQEHRTPYQSQFKLKAETRDPSSF TKNVQKMKVRDADLVAALSRLRGK VWVKAWPPLRGCRVLGCCFLAFICIRSL MDVKHSCPVCORELFYIHLRPRFSPRSA YLAVRDIGPKMARDTVNLPQARDPSE NASPALLQTHAEKVLVRRVGSGLGTLTL RRGDDPTFERQISFLKCLKLKLKSHGFGSE GAMPEEISH* |
| 1232 | 9283 | A | 2175 | 1 | 1312 | MGRNOSRKAENSKHESTYSPPKDHSSQ AMEQSWTENGFEKLGFRKALYYLDL TASCQSQELFQLYAGMSVVGTSMPVQA VCPYCGNRITVTTFVPGALTWLLCTTLF LFGYVLGCCFLAFICIRSLMDVKHSCPVC QRELFYYHRLRQMEIASSARTVVAAPSR CAGREGRGDANGKNSSPTAGSAMSSPEP PPQPPTHQAGVGLLDTFRSRESPSP/L RGNVVPSP/LPTRRTRTFSAIVR/ASQGP VYKGVCKCFRQRAIGFNYPAGWAG PDIF/LWHIS*LWKGGVIVPSGKGDEGHP NKMCSHPHPEK*/RIARPVKVVHHLTL APQAPKHETWSIGHYISSLGLVESTPLS LCFVGDFAGRRQOTLEDLPHETGLQR GNGPSQVSPGGKGYGGAGVGCGVFPAIS TAYGLQLOPLHLHLSIKSI |
| 1233 | 9284 | A | 2176 | 75 | 411 | PIITKEHLFVYVLPVSSGLDGIQ*SQKEG RGLAVPTPVSAAGLPAASMAEEAADQ VGRAALAWLCPAGRRRGFGGEMRAL VASRPDLLTASSGWWALGSEGRVKASAD |
| 1234 | 9285 | A | 2177 | 1 | 361 | GIKRRSGREATRALITSPNPRFRPAGQS QARAARP/WSAASSAMEAGSPAATET GKYIASTQRPDGTWRKQRRVKEGYVPQ RRSQYMK*ISM*SFSSRVNQSPGQ*ALRP LILSPHPGEGGEPGLQGQPNVNI REKEAAAGKRKRAEGLSKDS*LCBPW EETAQLPSAPQGSRAAPTAASDQPSDAA TTEKAKIKNKLKKLRQVEELQORIQAG EVSQPSKEQLEKLARRALEEELEDEL GL*GLSFEATAPVTPSRA |
| 1235 | 9286 | A | 218 | 151 | 414 | ERERESVVCVCMVRRVVCVCLRERERQ RQRDKRLCGEMRKIQYVNLHYISKYL YIYKYVILQT*TFIHYIYLYK*ICHTQMY |

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| | | | | | AVY |
| 1236 | 9287 | A | 2182 | 3 | 140 |
| 1237 | 9288 | A | 2183 | 365 | 2078 |
| | | | | | NLVHCHCLDIFINQAFDMQRDLQITPKR LEYTRKKEENELYESLMNIANRKQOEMK DMIVETLNTMKEELLDDATNMEFKDVIV PESGEPVGTREIKCCIRIQELIISRLNQA VANKLISVDYLRSEFVGTCLERCLQSEK SQDVSVHTISNYLKQILNAAYHVEVTFH SGSSVTRMLWEQIKQIQRITWVSPAITL EWKRKVAQEAIESLSASKLAKSICSQFRT RLNSSHEAFAASLRQLEAGHSRLAEKTE DLWLRLVRKDHAPRLARLSLESCSTGC LCLHRKPKLQQLGRGQYGVVYLCDN WGGHFPKALKSVVPPDEKHWNDLALF HYMRSLPKHERLVDLHGSVIDYNYGGG SSIAVLLIMERLHRDLTYGLKAGLTLETR LQIALDVVEGIRFLHSQGLVHRDILKNV LLDKONRAKITDLGFCKPEAMMSGIVG TPIHMAPELFTGKYDINSVDVYAFGILFW YICSGSVKLPEAFERCASKDHLWNNVRR GARPERLPVFDEECWQLMEACWDGDPL KRPLLGIVQFMLQGL/L*NRLLCSINSEQP NRGLDDST |
| 1238 | 9289 | A | 2184 | 2 | 468 |
| | | | | | GPEAVPHRACSLWLPTSPGTCPATRHS EHEFTQMWPGCASSLLCVGTPGEARA DHRCMRVTPVHLGLPGWVGAGARPH CCESATPGGPRGCTP/DDWVAHIPPSPF HK*GNPGCIRGDPRLGLLWPLCFMTCVAS DKAPALLGSACCSVWSVR |
| 1239 | 9290 | A | 2185 | 170 | 1224 |
| | | | | | PVWRGPAGFTPGIPSTTEKHTRLPSANM MVLKVUELVTGKKNONGEAGEFLPED FRDGEY*AAVTLAERQEDLKTLLAHFVTL GEPQLRKRETHERAELKKKKLQKRSKLE NLEDLEHIIQL*EK/RKKSRETVVPVVKDP EP*HYQTCWCEPFTPLKA/SLWENNLFPV EKFLSDKNPFDVCDEYKRTALHRACLE GHLAIVEKLMEAGAQIEFRDMLESTAIH WASRGQNLVDVLKLLLNKOAKISARDKL LSTALHVAVRTGHL*GCAEHLIACEADL NAKDREGDPLHDVRLNRYKMIRLLI MYGADLNKNCAGKTPMDLVLHWQNG TKAIFDSLRENSYKTSRIATF |
| 1240 | 9291 | A | 219 | 4 | 328 |
| | | | | | HGVSLFPRLCNGTISAHNLRLLS*SD SPASASQVAGITGMHHHARLILYFLVEM GFLHVGGQAGLELPTSGDPTLPWSPKCV DYRREPTSPGQTYIITQSKSP |
| 1241 | 9292 | A | 2190 | 93 | 458 |
| | | | | | LLLWTMSVIFACVVRVRDGLPLSASTD FYHTQDFLEWRRRLKSLARLAQYPPGR GSAEGCDFSNHSIQKVKWHFNYVSSSQ MECSLEKIQEELKLQPPAVLTLEDTDVA NGVMNGHTPM |
| 1242 | 9293 | A | 2191 | 1077 | 1818 |
| | | | | | LLLWTMSVIFACVVRVRDGLPLSASTD FYHTQDFLEWRRRLKSLARLAQYPPGR GSAEGCDFSIHFS/SFGDVACMAICSQC PAAMAF/CFLETLWWEFTASYDTTCIGL ASRPYAFLEFDSIIQKVKWHFNYVSSSQ MECSLEKIQEELKLQPPAVLTLEDTDVA NGVMNGHTPMHLEPAPNFRMEPVTALG ILSLILNIMCAALNQPVQHVYLGQLDLG AH/HRKSFIGREKGNILVF*VDMIQ |
| 1243 | 9294 | A | 2192 | 1 | 999 |
| 1244 | 9295 | A | 2193 | 1544 | 1928 |
| | | | | | QKVRGOIREGCLLEVALGSSRPFAHVCL GLPTGQTADGKSYKYQVIGKHNHVAVP THFFKVLLEAAGQQLNELRTYVMPNAP VDEAIFLEAFLWPIESIERASGILLFVQNIL ARAQSLKAITAGSK |

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| 1245 | 9296 | A | 2194 | 2 | 1068 | ARGWVPRPKPLAVFVSGREVLSSAAFA ALCPRWIPRRGSKSLAGRPPILGRSPAM RALRAGLTLASGAGLGAVVEGWRRRRE DARAALGLLGRIPVLVAAAAELPPVPG GPRGPGELAKYGLPLGLAQLKSRESYVLC YDPRTRGALWVVEQLRPERLRGDGDRR ECDFREDDSVHAYHRATNADYRSGSFD RGHLAAAAANHRWSQKAMDITFVLSKV APQVPHSNQIAWNNLIEKYRSLTRSYQ NVYCLH*GHFFLPRTEAD/GKSYVYKQV IGKNHVAVPTHFFKVLILEAGQGIELRT YVMPNAPVDEAIPLERFLVPIESIERASG LLFVFNILARAGSLKAITAGSK |
| 1246 | 9297 | A | 2195 | 204 | 507 | GSPGTRSETREPGAMSQPPAPPPPLPPPP PPEAPQTPSSLASAAAAGGL*SGETGESF PGAARISVRRVYFSRPPVLSSASVPSAA SGTSSNSCWGLRR |
| 1247 | 9298 | A | 2196 | 1 | 460 | EFKQLIHIEHPQNGGASVIHAYSNELSHL SPMEMERFARKSLVGS*CSSENENSGSFP T*WGVVHGAATYLPDFLDYFSFNFPNS P/VKMEILGKKDIETTTMSNFHAQSLTVL QPGRQSETPSQKKRKKFMDLSSRWEGE TKNKYRRLTN |
| 1248 | 9299 | A | 2197 | 199 | 769 | |
| 1249 | 9300 | A | 2198 | 182 | 2889 | TEKGAAAGTAGCSRRQHASPOSYGSFA SWSFAPLSAAPSPSSSSRSFSAGTAVPS SASASLSQPEPRKLLVPPTLHAQPHILL LPAASAAAANAKSRRPKKEKREKERR HGLGGAREAGGASREENGVEKPLPRAN DKTRSDFDPSDQAAAECLSRKRRILKG SCQTGYLRKALFSDTVTLGIKASTYGFVW GGMIQSIVKGLAETFNFWIHWELNDLQ YISALFACSEEMPDYHLEKQLADKIKDKI KERDKEKEREKKHKHVMNEKKENGVEV KILLKSGKEKPKTNIEDLQIKKVKKKKK KKHKENEKRRPKMYSKSIQICSGLLT DVEDQAAKGFLNDNIKDYVGKNLDTK NYDSKIPENSEFFPVSLKPRVQNNLKRL DTLEFKQLIHIEHPNGGASVIHAYSNE LSHLSPM/EGWERFAEEFVGL/*VSENE NSAAFYVMGIVHGAATYLPDFLDYFSFN FPNSPVKMEILGKKDIETTTMSNFHAQV KRTYSHGTYRAGPMRQISLVGAVDEEV GDYFPEFLDMLSESPFLKCTLPWGILSSL KLQSRKDSDDGPIMWVRPGEQMIPVAD MPKSPFKRRRTTNEIKNLQVLPRTSEPRE MLFEDRTRAHADHIGQGFEROTTAAVG VLKAVHCGEWPDPRIITKDVICFHAEDF LEVVRQMLDLHIEPPLSQCVQWVDDAK LNQLRREGIRYARIQLYDNDIYFIPRNVV HOFKTVSAVCSLAWHRLKLYHSEEDTS QNTATHETGTSSDTSSSLGPHIDNMIC AVSKASLDSVFSKDLHISKYELQQIKHEPI ASVRIKEEPVNVNIFEKTITALLNNMDGKN VKAKLDHVQFAEFKIDMDSKFENSNDK LKEELCPGNLSLVDTRQHSSAHSNQDKK DDHILC |
| 1250 | 9301 | A | 2199 | 2 | 122 | |
| 1251 | 9302 | A | 22 | 10 | 284 | |
| 1252 | 9303 | A | 220 | 436 | 777 | IYSYKGTGPV*KRKNCQSRKIEQNPIICW LQATHLKCKETYKLE/MRKICQANTNQ EEIGIL*NSRLYSKNYYQG***KGSILQED MTILNMYAPKNRSGVMYRQKLIELQGE |
| 1253 | 9304 | A | 2200 | 1130 | 1437 | LSRIMKAWFPLFKIPFRDKVFLSPPAW SAVAQSRLHCSLELVGSINSISSAS*LGW EYVRCAPQCPG*FLAFCRDGALPCPSWS QVICLP**PPKALGLQA |

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| 1254 | 9305 | C | 2201 | 279 | 449 | MHPVSCWVIMSCRPLCTRLILSDSPGPP SDICVSRKNFNSNYAMVLPOCFITCI* |
| 1255 | 9306 | A | 2202 | 1 | 1173 | |
| 1256 | 9307 | A | 2203 | 1 | 2112 | MGVELFTPASVMGKRCSSCPGQLSGN GEPFRSEIDSSVVRGGWQPRWFLCGGI LSYDSDPEDAWKCKGSGIQMAVCEIQV HSVDNTRMDLIIPGEQVYFLKARSVAER QRWLVALGSAKACLDSRTQKDFEAE NTENLKTMSSELRLCCDLLVQQVNTK EVTITGVSNSEEGIDVGTLLKSTCNTFLK TLEECMQIANAAFTSELLYRTPPGSPQLA MLKSSKKVNQYITNKEEFTLLQKVLVH EVEADVAQVRNSATEALLWLKRGKFL KGFLTEVKNGEKDIQTALSPSSN/SC/CI WRLPGDVLTL*KRRL*ANAAI*LO* SQPVSAFSSSLSP/CGTIFNGKEKGGCKFD IFVLMFRLISKKTQTQALRRRFEKCLH NSYSEPVGSLMHISSGIMVPFHFVPAFI SRTDTLFEMREDNAYGKTLRQHGWVV RGVFAALRAAPSYEDFVAALTVEGD HQKEAFSIGMQRDL SylPAMEKQLAIL DTLYEVHGLESEDEVLYPLGCLDCCPEGE QSWFQKNVFGLSQLPVGRGVQLPCG HEGPAKENRVVLCMLAITPESAEAQNR DNHLWSSVVRVDGELMDDGLTSALRT QITFGMICCVNALSSSENKVVASLLTLVRF TAAPSLPTLHCVSRHLQVEDPHLVMSVC ECGTTISLPEPSQLQCSSTAQSLEDSSR MAEH |
| 1257 | 9308 | A | 2208 | 132 | 509 | NMVQITTCGPGLMSTPCTGPAQARR*/ WLVECLSLTGMGPGEGRGQGAEEAP N*VLGTGAGSGPCPPGIQQTSPHGFH SQVLSLSPTRICPGFLAYLLSLFTPREE LQLTQNDTLAPRV |
| 1258 | 9309 | A | 221 | 212 | 275 | FLILNCNSF*KIYPKYKSLIR |
| 1259 | 9310 | A | 2218 | 491 | 812 | |
| 1260 | 9311 | A | 2219 | 2 | 948 | IFKIAFAKFGVWAGEWGREGMSGRKWS ARAAAQRAEPRSGRQVRPRALRLPPARQ PROLESPRPAAAPESPSSSAMA GWN/ AYIDNLMADGTCVTGAIVRYQDSEPPF WHAVPKG/TRFVNITPAEVGCPWLAKTR SSFLR*MGLTLWGGQKCSVNRGLHCLQ EWGILACDLRYQEPGGAPHLISVTCHPR LNKDAKSWLMGQRKVSHGGLTNKKCY NEMASHLSGFPSTDRLRVFPLSPPTTAF PLSLPIHTQTNFYFLGPLPHTPYCCQNHM GLGGQGLMGQTPSPTHPSRVWLEKLLF FGVFFFSE |
| 1261 | 9312 | A | 222 | 770 | 1573 | NHLEIVNLCNVGISQSFQI*LKAQATKE KINCIPILKTFG/TEKYIKNVKRQYIE*Q KISANHLSDKRLVFRIFYLKTITVQY*KD KPIIK*VKDLNR/HFSKEDT/YMTNKYMK RC*KSSTIREM*IKTTMR*TLPHYRWNIIK KTDNNNC**GCG*TGILJHC/WLECKIMY P/IFRTY*QFPEKVQHYPSDAAILLLGIY PRNMK/SKCLPKNYTRMFITELLJILKK*K QLKC/PIN**WIK*NDKMW*HMIKYYSA IKRHRVLINA |
| 1262 | 9313 | A | 2221 | 259 | 941 | PVSWSLNSCRFFFF*QDQSLPSVV/QAGS GQ*RNLDLSLQPLASRFK*FSSRL/SSW/ DYRHMATMARLIFILVEMGPTMLARL VLNFLTSSDPPTSAPFKWLGQGVKPN RAVGFN**LGYYSILYHSNSPGTDLVFIL FIYLFYILFLRQEQNSAAQARVQ*WHNL GSLQSPPPGVH*FLCLSLPSSWDYRCAPP HQANFCIF*IRDGFPCWPGWSRTPDLR |

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| 1263 | 9314 | A | 2222 | 343 | 600 | MSPLSQFVDGTLKIQCYGTFEHSVAI RLCEGIMSAHCNCLPGSSNSPASAS*IA GIIAP/CHHAFLIVFL*RQGFRIYFFK |
| 1264 | 9315 | A | 2223 | 142 | 583 | |
| 1265 | 9316 | A | 2224 | 163 | 1603 | IQAGQCGNQIGAKFWEVISEHGIDPTG TYVHGSDSLQLDRISVYYNEATGQKY VPRAILVDLEPGTMDSVRSFGQIFRP DNFVFGQVWGQVTTWAKGHYTEGA LVDVSLDVVRKEAESCDLQGFQLTH SLGGTGSGMGTLLYQQGFKEYPDRI MNTFVSVPSPKCLDTVVEFYNATLSVH QLVENTDETYCIDNEALYDMCFRTLKLT TPTYGDLNHLVSATIE/CVVTTCIRFPQ LNADLRKILAVNMVPPRIJHFFMPGFA PLTSRGSSQYRALTVPELTPARSFDAK NMMAACDPQGPINFNRGLLSRSGSGC PMKEGRMKQML*RCKNKNSSYFCGNE SPNNVKITA VCDIPTSWASKMAVTFUGQ *HSPSQELFKRISQFTAIMRRKAFULH WYTGEGMDMEFTEAESNMNDLRL*S IKQLPRMPTQEEEDFGEEARKRRPKGR APNQLKASQFP |
| 1266 | 9317 | A | 2225 | 234 | 1374 | KSGGLRRRQRPGRSAAGVEELPFGMEK FKAAMLLSVSGVDALGYRNVCKENSTVG MKIQEELQPVGGLGHLVLSPEWPPSD NTIMHIATAEALTTDYWCLDDLYREM VCYVEIVEKLPERPDPATIEGCAOLKPN NYLLAWHTPFNEKSGFGAATKAMCIG LRYWKPERLETIEVSVCEGRMTHNHPT QFLGSLCTALFVFAAQGKPLVQWGRD MLRAVPLAEKYCRKTRHTAEYQEHWF YFEAKWQFYLEERKISKDSKNKAIFPDN YDAEERE*TYRKWSSEGRGRRGHDA MIAYDALLAAGNSWTELCHRAMFHGGE SAATGVIAACFLGLLYGLDLPKGLSQD LEDKEKLEDLGAALYRLSTEEK |
| 1267 | 9318 | A | 2226 | 139 | 366 | AMAYQLYRNTLGNLSQESLDELQIGSL NTYRFCDNVWTFVLNDVFEVRETELKIV DKVKIVACDGKNTGNSNTE |
| 1268 | 9319 | A | 2227 | 160 | 588 | AMAYQLFRILPLETSFQESLD*LIQSQI TPPTCPFKFYQLDRAINAALAQRVRN RIVNFRGSPKYGTRFCNDNVGDFWYRND VEFQRG*PEPIKRG*K*KLVA/CDGKNTG LPITWNRKKYDFFYTHLLFIAFEREA |
| 1269 | 9320 | A | 2228 | 918 | 1085 | QEKLEI*VLCFNFFSFFFFFCLVD/*FL FGKGAV*TLFVSSASHRYRQGKTR |
| 1270 | 9321 | A | 2229 | 145 | 365 | |
| 1271 | 9322 | A | 223 | 86 | 427 | SPQIRKQEISILSLDTGTLIYENPKESPPP KLLKVIKFNKATRFKINMQKSVFLHPR NQFENEFFKILSPGTEPS/RSEYLGINIK EV*NLNTKNDIVEKMKELLKWKDSC |
| 1272 | 9323 | A | 2230 | 2 | 750 | ILGFDLPQPPGRRWAAPVVSGLSRKVR FSTG*VRPFAKLVGPSVQVYGIEGRYA TVALYSAASKONKLEQLEKELRVAQN PRRNPKVACFLFNPLCESRSIKSEKALN DITSKKRRFPSPSTTQ/LNQFCLAGKMG PI*ANNPKGVVSGGLFTMDGVFHSRERV PLHSGPLASSFRKESHTLLNLT/VLKEFP KVKGOVLELGAKYTPDPSLGGMIVRIGE KYVDMSVKTIVQKLGWARMREIV |
| 1273 | 9324 | A | 2231 | 100 | 468 | ATEPLAPSERREVSILPLVPAPLPPPRPP VPSRTRTRPWRP*ACFPMTLAASCOPT RSPWPSSQOPIQAPVYG/PQNIKTIGDAY EFAVDVRDFSPEDIIVTSSNNHIEVRAEK LAADGTVM |

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| 1274 | 9325 | A | 2232 | 228 | 721 | LWQLHAAPLGAPLPRQVIRALRGGEV HREGTSAPGRHRRRCGPVLEQVLHSL QPCVATKTDVATGTDVAMKTGNIKTLG DAYEFAVDVRDFSPEDIIVTSSNNHIEVR A/REA/ERPDTGTVMNTFAHKCOLPEDVD PSTVSALREDGSLTIRAWRHPHTEHVQ |
| 1275 | 9326 | A | 2233 | 3 | 605 | KKLTPVVRSRVERDPRVRRGLRPHFVLS SLRPPGQGPAPSVDEPNQLFHLPSGEKIP FLFLLLFTPPRPVLSRPRTRPWRRP* ACFPMTLAAICGPTSRPWPSPQAPV/VAG NIKTL*DAYEFVVDVRDFSPEDIIVTSSN NHIEVRPEKLAADGTVMNTFAHKCOLPE DVPDTSETSLGEDGRLTIRARGHPHTE H |
| 1276 | 9327 | A | 2234 | 229 | 510 | KGIWYINMEEQFVI*IHFL*TRSQFYFVNI TFKYITYTHIYVQLYIHVH/MICKPFIYINFI *JDICRQVIDYRDPKRLNNSCKFSSLT GV |
| 1277 | 9328 | A | 2235 | 203 | 334 | SRDRHSFIL*LIHLSIYIITIYMYNIYMC YMYQRQKYGKTNP |
| 1278 | 9329 | A | 2236 | 1023 | 1470 | TPKTKHNSNPFVSVPHAHKFCASYFFCLC VFMGSKLNLAIYKNVNSKLYLLRNVI F*FIFTQLFILIYFFYTLNQTQYFLFMIFL SCSHGICFPIFLSISITGWDLTNNNVGR KYFATVDYITLKFYIMKIYNSLYASKKK KKA |
| 1279 | 9330 | C | 2237 | 226 | 450 | |
| 1280 | 9331 | A | 2238 | 3 | 449 | LLRRVSVTAAALSGRPLGTRLGFGGFL TRGFP/KAAAPVRHSGDHGKRLFVIRPSR FYDRRLFLLRFYIALTGIPVAIFITLVNV FIGQAEIAEIPGYVPEHWYVYRKELE VRKLMHVRGDGPWYYIETIDKELIDHS PKATPDN |
| 1281 | 9332 | A | 2239 | 3 | 635 | HASAHASAMSLRRVSVTAAALSGRP LGTGLGFGGFLTRGFPKAAAAPVRHSGD HGKRLFVIRPSRFYDRRLFLLRIHNLAL TGLPVTIFIALVNVFIGQAEIAEFPGYV PEHWGILLRHPISKMGFAR*FLMIGPEK DIMERNNGPSFQISLKKAGIYGVKGW EVVKI*WHVEEGDGPWVLLWRFPDQGT LLDHSRKRKPTWNTN |
| 1282 | 9333 | A | 224 | 35 | 397 | FLTGTQWKG/DSPFNTWC*DH/WNIHRN LDLYLPIYIKINLKLTGPNRAKTIKLPE QNIGENLCDL*LSRERYSTKSITIRKL/D TLGFIKIKNCISKDTIRKR*ATDWEKIFA NHVLKG |
| 1283 | 9334 | A | 2240 | 811 | 1005 | SNFTGKIHK*LTSFKIVNLFYI/FFETGFH SLTRLECSGMILAHCNLRFPEPSKLPFG AIDSF |
| 1284 | 9335 | C | 2241 | 256 | 540 | MSPAKATEMLIFGKKLTAGEACAQGLV TEVFPDSTFQKEVWTRLKAFCKLSPNCL EIFKEVXRKRERXKLXAVNAEFCNVLQG RWLSDECTNAV* |

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| 1285 | 9336 | A | 2242 | 602 | 2067 | SSSSGLALGMQRPLRLARLGTGPRALSA PAATGFABELAAQGMAMAYLAWRLAR RSCPSSLQVTSFPVVQLHMNRMTAMRASQ KDFENSMNQVKLLKDDPGNEVKLLKY ALYKQATEGTCKMPKPGVFDLINKAKI WDAWNALGSLPQGSQCPG*NYVDLVSSL SPSIGNPPSQVEPGTERDNLQGFETLVVT S'EDGHTKIMFNRPKKKNAINTEMYHEIM RALKAASKDDSIITVLTGNGDYSSSGND LTNFTDIPP/GVGVEEKANTNA/VLLR/EF VG/CFDIFPKPLDCSGSMGPGSGASPTL LGAYSMPLVLLHLDRTGTFHTFP*SP* AQS PEGCSSYTFPKIMSPA KATEMPFIFGKE VNOREEACASRDLTGEPFWIALFRKKV WDQG*RAFCKSFPPQMALEEFSEKVIK REREKLHAKVAEECQPFQGWLSDE C/INA/VVNFLSQKIKNCDDHLQQHQS SQGRMCCSLCLSTSTGK |
| 1286 | 9337 | C | 2243 | 2163 | 2402 | MSQAAASHKSKLTPKNQRAFFILLRKSQ CQDPSRGESEEGWWPIQACRCSMETFLP QMFQSWHQYKYNVSRDQFFTLK* |
| 1287 | 9338 | A | 2249 | 761 | 1178 | LSTPLTSWCVMMRRITPGSPTRCSCSAI PGTQPLGGGHQ*RGCHQCVASSPR*AWP ASGPAKLQ*LPQPKTQQRAPATGEHVPP VQPSAQ*PHSRFQSSSETSRPADGSEQQPA RASGPGARRPPIHQPROVINCWLRRRC |
| 1288 | 9339 | A | 225 | 832 | 1043 | LLWWFRLRSSPGCTQQGPWHLVCVYGY AG/GWAGPFWHTCPWDPSHCQPTG*CP WCVWFCCNTYLLVPN |
| 1289 | 9340 | A | 2250 | 135 | 408 | PHSRFQSSSETSRPADGSEQQPARASGPGA RRPPHQPRFHPPPSA/RAISIECPA*AVMR SGSEPRARQEYSLGLWTPSQFLQILYLA RSPT |
| 1290 | 9341 | A | 2251 | 123 | 578 | TTNIFKWAKYFKRHFSDI*MANEHM KRCLTSLTIMEMQIKTTIRCHLT/PRMPI KKIIKC**GWRETTGLI/YAWWECKIVQ/P AFR/TVWQFLKRLSQHPTIPFP/GMCPRET KTHIHSKTY/TQMFMALFIEARKWKQF KCLSTNEWNNVVRP |
| 1291 | 9342 | A | 2255 | 209 | 531 | |
| 1292 | 9343 | A | 2256 | 1 | 308 | AKRAQSYAERLRLGLAVHGEAQCTELD MDDGRHSPPMVKNA TVHPGLEPLMM AKEKPPITVVGDVGGRJAIIVVLYVHV QRWHSWLLVSRSLSTGLYF |
| 1293 | 9344 | A | 2257 | 2 | 1161 | VRKGTDLGALPVPMPAMNAARTGYRVF LANSTAV/CELAKRITERLGAELKSV VYQETNGETRVEIKESVRGQDIFIQITIPR DVNTAVMELLIMAYALKTACARNIGVI PYIPYSKQSKMRKRGSIVCKLLASMLAT AGLTHIITMDLHOKELQGFSSFPVDNLR SLHLFLAFSIIQGRKFNLQEMQVIVG*V FLDAGKGAQSYAERLRLGFVAVHSR GEGFSCTKLMDDDGRHSPPMVKNA TV HPGLEPLMMAKEKPPITVVGDVGGRJ AIIVDDIIDDVESFVAAAEILKERGAYKI YVMATHGILSAEALRLIESSVDEVVVT NTVPHEVQKLCQPKIKTVDISILSEAIR RIHNGESMAYLFRNITVDD |
| 1294 | 9345 | B | 2258 | 80 | 402 | XVPTVDTYDGRGDSVVYGLRKSCKKFR RPDIQYPTADTEDITSHMESEELNGAYK AIPVAQDLNAPSDDWSRQKDSYETSQDL DQSAETHSHKQSRLYKRYAYDESH* |
| 1295 | 9346 | C | 2259 | 272 | 409 | |
| 1296 | 9347 | A | 226 | 764 | 1016 | LLQAGAHACNPSGFGAEKAGGSTDLSR GDQPGQHGETPSLLKVQKVA*RGGA PL* SQLARGGGGCSEPRSHD*IPAWMTEGDS V |

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| 1297 | 9348 | A | 2260 | 2 | 628 | EHSIVGTRLVSGQLQPSQPNADQGKLT MRIAVICFCLLGTCAIPVKQADSSE KQLYNKYPDAVATWLNPDPSQKQNL PQTLPSKSNESHDMDDMDDEDDDG PCGDSQSDSDSDSDVDDTDDSHQSD SHHSDSEDELVTDFPTDLPAVEFTPV VTDVTDGRGDSVYGLRSKSKFRFRP QVNLPTDTPDGGSD |
| 1298 | 9349 | A | 2261 | 67 | 1276 | SHASGRQRSTASSGPDVSGQLQPSQPN ADQGKLTMRIAVICFCLGTCAIPVKQ ADSGSSEKHFYNKYPAVATWLNPD SHKQNLPAQNAVSEETNDFKQETLPS KSNESHDMDDMDDEDDDHVDSDQSI DSNDSDDVDDTDDSHQSDSESHSDES DELVTDFPTALPAVEFTPVVPTVDTY DGRGDSVYGLRSKSKFRFRPDIKYP ATDEDITLHMESEELNGAYKAIPVAQD NAPSDDWSRGKDSYETSLDQSAET HRHQQSRLYKRKANDESHSDCDW* ARTFPKVSREFHSHEFSSPWRFCLFAP KSREEDNTPLFRYSIQELDSASSGGQ LKGKNTISPLCHLVQKKNFGIAKMKEN HMLLSPVYWLKCVSI |
| 1299 | 9350 | A | 2262 | 1 | 651 | MTAFNSGKVDIVAINDFIDLNMYMYM LYDSTHGKFHGTVKAENGLTVNGNPIT IFQDQDPSKIKWAP/LAKVHDFNGIIEG FTTVHTTATQTINGPSGNCVMAAGL SRTSLSLLA/LAKPVGKVIPELNGKLT GMAFHVPTANVSADLTCRLEKPA/KYD DKKINTHSSTFDAGAAIVLKHDSVKL ISWYDNEFGYSNRVHMLMAHNASKE |
| 1300 | 9351 | A | 2263 | 2 | 5264 | |
| 1301 | 9352 | A | 2264 | 56 | 1357 | IRLSVCSSCSTVSRIFCVASRATSLRTP M GKVKVGVNGFRIGRLVTRAFAFNSGK VDIVAINDFIDLNMYMYMFDVTHGKF HGTVKAENGLVINGNPITFQERDPSKI KWQDAGAEYVVEITGVFNQPWKKA GAHLQGGAKR/VIISAPSLMPPMFVVG VNHKEKYDNSLKIISNAFLQPPTCLAP LAKG*FHIDNFG*SWEGLIDHSSMAIT GNPRKTVDGPGRGNCGRGWAAGLSR TSSGLY WALPKAVGKGHP*G*TKGLT GMAFPVVPNCQNVSVVDLTCRSRKTLP QYD*HGRGVVKQASEGPPQGAIGLYTE APRWVSSDCNSGPPVFPFDAGAIGL ANDHGFVKLISWYDNEFGYSNRVVDLH GPHGLQGSKTPGTTEPQARGTRGRDE TLTAGESLPHSDPHITESPLTLTAM |
| 1302 | 9353 | A | 2265 | 34 | 476 | LSGGPRRAASCASSAGLVLFFMPMFI VNTKLJHRASLEGFSLKTQQLAQAN RQAPPN*FAFNVFDPQVYSFGGSSE PCALCSLHSIGKIGGAPDAPYSKLLC GPAGRSRLPIQARTRVYINYDNRGQ MWA GNNFHLS* |
| 1303 | 9354 | A | 2266 | 63 | 470 | QQPPFERFAHQFARPPAPFTMQPASAK WYDRRDYVFIIEFCVEDSKDVNVNFEK SKLTPSKLSFLSNDVK*STQLNNFDW LVFSLKLLIFLVSLKRLNSFFHILY SCLGGSDNFKHLNEIDLHFCIDPNVSS LYA |
| 1304 | 9355 | A | 2267 | 2 | 854 | RAFCCVTSRRPASFPVCTHARSFSLAP LFLHFPLLPDRRSRFRVHFWGRSSSP HAAVRLREARRGRDRREKAESPTGEK STSPSSRRQRGPPTKVRPPAPFTMQP ASAKWYDRRDYVLKWEFVFLNLRD VNVNFEKSKTYNFSCLRGSDNF*GI* MEJDLFH/CID/PNDFQGLKGTDRSIF MFLRKRRIWASSWPGLTKIERGKGLI VWVSDFNINWWDWEDESDEMSNDRFSE WMNNMGGDEIVVDYPEVDGADDSQSD SDE |

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| | | | | | KMPYLE |
| 1305 | 9356 | A | 2268 | 117 | 388 |
| 1306 | 9357 | A | 2269 | 66 | 354 |
| 1307 | 9358 | A | 227 | 748 | 1488 |
| | | | | | RLTKRPETFPRRHFKPLTLKTPVAGATPL SPSHPDWPVFNPIPLTNRT*PPLQLQLRQ PSRSCPETTQGPASISAEELPVRSPPPFR LFPTPE/PLSRQWP*EVEGTSRTFFKAE GQK/EGKVKEGKTEGPCSPRRTRILPPY SRLESGFVHWGEQGNRKSWPPNLPDQ GF*QEREEAMGHIPSPGIRQRHRTSVQE *GSEIKPK*CFEPKAFNPRFWGLGLT/TR PLPLHSQKSRQDS*NTG |
| 1308 | 9359 | A | 2270 | 148 | 398 |
| | | | | | RPAKRGAAAMDGRVOLIKALLALPIRPAT RRWRNPFPFETFDGDTDLRPFIVQTAS YPPWARTRSSARPISPPETSCVLA |
| 1309 | 9360 | A | 2271 | 356 | 1241 |
| | | | | | KVTLITRLTGFALQVGDPLHQEGEPPPO LITGAFWPEMKRVFGWGGGRGLUGRET LQPGIGGCSGEGPLCYWPPGSPAPFSF RASPPLEPPRCPRLRSCLSPRSACLSRNS APGSCCRPWASLWSEPPSPSSQAPPM YIWLTLSCAPVAQS*APVTHWDHPLPPL PSPLLPTRLDDLIHFGPQTLRCQSHRH PSHPHRQDCWLLM*ITWVHLGGWAGUH SPWTVIQTAGRPRLDSPSARPISSPIPE TFCAPATWLPQLSCAQAKFESLISLW TKLVFAHKRSIS |
| 1310 | 9361 | A | 2272 | 2 | 178 |
| 1311 | 9362 | C | 2273 | 88 | 228 |
| | | | | | MKVDKDRQMXVLEEEFQNSPEELKME LPERQPLRQXTTDDVCRE* |
| 1312 | 9363 | A | 2274 | 3 | 382 |
| | | | | | VDRTIMSDSLVCEVDPELTEKLRKFRF RKETDNAIIMKVVDKDRQMVVLEEEFQ FVVYSYKYVHDDGRVSYPLCFIFSPVG CKPEQQMMYAGSKTRLVQTAEITKVQT GMWLQSVRERWCGSVV |
| 1313 | 9364 | A | 2275 | 89 | 636 |
| | | | | | KTAELRKEEACQNNHALPGLSRQSDSL VVCEVDPELTEKLRKFRKETDNAI MKVDKDPARWWCLEGKNFNISPOREL KMGFPRDRKPRFVVYSYKYVHDDGR VSYPLCFIFPPRPVVGCKPEQQMMYAGS KNRLVQTAELTKGVPKSRTT*TSLRLP WLAQEKLSFLISJGAGD |
| 1314 | 9365 | A | 2276 | 2 | 2453 |
| 1315 | 9366 | A | 2277 | 1 | 1008 |
| 1316 | 9367 | A | 2278 | 1 | 884 |
| | | | | | MYDKCRYHQRSLLHKVSNSEKISSGLLL SRLQRRPRGRDAELRRAGSVKRRQRG KMAAAVQRAWTVBQLRSEQLPKDII KFLQEHGSDSLAEHKLGNINIKVGT ANKDHLVTAIYNHLFETKPP*GYLKV*S KYSEQVKCERLMKINPKETKSERDPW NEGPPKYTKSCS*KRGDKTQLFPKRGD VIVHCWYVGNITKMGIVF**YLIFQISA KKKEKCPSL*GFKVRSRPIKLSRGWDEA LLTMSKGEKARLEIEPEWAFGKKGLPD AKIPPNAKLTPEVELVDID |

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| 1317 | 9368 | A | 2279 | 3 | 510 | AIRAVAYCADMAQSMNHTTLHQSRHWH RIGIKKPRSQTDQSLTGVDPMFLKNNMR AKKHNNMGLKRMQANNAKAMSARAE AIKALVKPKEAYL*IPNGVSRKLDPLAYI AHPKLAKRALARIAKGLKCRPEALAEA RAKDQTKVQGVAFAP*AIAPAHAKRTQAP TKASE |
| 1318 | 9369 | A | 228 | 34 | 478 | LSPRLCESGAI*AHCLN.RPPGKFQFSCLSL SUSSWADYRHAPPTQLIWFVWYFK*RGF QLVL.VQAGLELILTL*IPPASASQKCVWD YQV*APH/WPALYKVS*EKWFIIMFFA PFSWLSLGTGKFVRKVAVGLGTLPTG WALCSLWKY |
| 1319 | 9370 | A | 2280 | 9 | 674 | IERLQVRIACSCRD AIPGSSHASAHASEA LREPLRNGADMAKSKNHTTNNQSRKW PURNIGIKKPARSIQRYEFS*RGWPPQVSLR NMRFAQRSTNNKGP*RLQANKLPRAM SATCPRLIKAPPLKAPRRFKPDPPKGVVS RKLDRLAIYIAQPGQLGSVACP*LPGRGP RLCPPKAKGGGQQAQAKDQTKGFKP RPRVQAPVSVSVQAPKRTQAPTAKASE |
| 1320 | 9371 | A | 2281 | 417 | 822 | RENCILLSTRAQSVFNAQGTALWSFQDP ATGEGGAGHGRMLMRPSLPSQASAC* /PRFGESKLAPVGKFPKMCLELPLSHH LSRGCSGASEGQLCLEVPATARVGVHK PSQSRGLEFSVWVMSDLCSGPPL |
| 1321 | 9372 | A | 2284 | 85 | 409 | TCGLPMCQKQTVSWGGKTPSLRRFPQR PRPPRGQPPSGARWEH/PPGTTAPRRSR RPSPPARLAGPEP*AKSPLHAANSRGQTK GHLWKTLVLVFKKPNFFFNFFHN |
| 1322 | 9373 | A | 2285 | 193 | 609 | NQINFCLNGKYTYICIDTLPYMFNIHTL KHINTSVIISLEFAI*HKGOVELHIKITYRS NM*WLGHNQRN/LCPQEGEEIPNEA*IF SIKRSQSWPGTVAHACNLTITLGG*DGRIS* DQVFKTSLINIVETPSLLKK |
| 1323 | 9374 | A | 2286 | 117 | 433 | |
| 1324 | 9375 | A | 2287 | 2 | 1923 | VEITPPQGSVHSGHLGSVVGDPHGTGN AGERGPRGKGARVALALDSGGMDSSPSLP LIRTPESSLHEALDQCM TALDLFTNQFS EALSYLKPRTKESMYHSLTYATILEMQA MMTFDPQDILLAGNMMKEAQMLCQRH RRKSSVTDSSSLVNRPTLGQFTEEEIHA EVCYAECLLQRAALTLFQSSHGGAVRP RALHDP SHACSCPPGGRQHIFLLQDEN MVSFIKGGIKVRNSYQTYKELDSLVSQSS QYCKGENHPHFEGVKLVGVAFNLTL MLPTRILRLLEFVFGSGNKDYGLQLLEE GASGHFSRVLVCMLLCYHTLTFVLG TGNVNIEEAEKLLKPYLNRYPKGAIFLFF AGRIEVIKGNIDAVSDGGPGRGWGSLGV SQTSRKSGTCDILDRIDWGRGGGPREN QPESRGRRGPSGRAAWEDKGGGICGA WDFDWEI*DCSIAVEGGGGRCLREAEVR KAHLFRA*RLGWSLVPLHYSSLLLFHF VTKNQSPRRGLYLSTPCKT*EVKPGLE ARSPGSGWPT*A*HRAOPLCPGGVPVCC GVGRFGGRCRGVAGWAPVRLTRRCLQ AIRRFEECCEAQHKKQFHHMCYWEL MWCFTYKGGQWMSYFYADLLSKENCW SKVG |

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| 1325 | 9376 | A | 2288 | 1 | 1818 | LGEGGGKKGLWDLVAGLHPLGGQQSP MQQKGHKDSLYPECGTPESSLHEALDQ CMTALDPLTNQFSEALSYLKPRTKESM YHSLTYATILEMQAMMTFDPQDILLAGN MMKEAQMQLCQRHRRKSSVTNSFSSLVN RPTLGOQTETEEHAEVCYAKCLLQRAA LTFLODENMVVSFIKGGIKVRNSYQTYKE LDSLVOSSQYCKGENHHPFEGGVKLG GAFNLTLMLPTRLRLLEPVGFSGNKDY GLLQLEEGASGHSFRSLVCMVLLCYHT FLTFVLGTGNVNEEAELKPYLNRYP KGAIFLFFAGRIEVKGNDAIRRFEECC EAQQHWKQFHHMCYWELMWCFYKYG QWKMSYFYADLLSKENCWSKATYIYM KAAAYLSMFGKEDHKPPGDDELPRAV PGLKLKIAGKSLPTEKFAIRKSRRYFSSN PISLPVPALEMMYIWNQYAVIGKQPKLT DQILEIITKAEMELEGKPENEYSVDECL VKLLKGLCLKYLGRVQEAENFRSISAN EKKIKYDHYLIPNALLELALLMEQDRN EEAIKLESQAKQNYKNYSMESRTHF*IQ AATLQAKSSIENSSRSMVSSVL |
| 1326 | 9377 | A | 2289 | 486 | 713 | SKFYLFYLFYFFVYTYVINIVYIKI*QQID LNFIYLFYLFYFWRQSRAPLSKL*CSGA NMTHLSLNLPGSRNTPAPALQAAGTTG M*HIITWLFVVFVETEFHHVGLKFLSLD IHPPWPSKVLG*QGGWIV |
| 1327 | 9378 | A | 229 | 28 | 359 | KGKIPWLCG*PONEKLM*HKSLSLATVFC IYR/TN*KNKRIISINAEGAIDQIHTFMNF LKNF/MKTVRKLKMDGSLNIIKEICERP TNM*DGELDDFPKIGDEAQRPP |
| 1328 | 9379 | A | 2291 | 1 | 774 | |
| 1329 | 9380 | C | 2292 | 214 | 483 | |
| 1330 | 9381 | A | 2293 | 701 | 1033 | |
| 1331 | 9382 | A | 2294 | 440 | 1383 | SSSWNRAFSRKDKDTWMHTPEALSKHFI PYNAKFLGSTVEQPKGTEVVRDAVRK LKFAHIIKSGGQKIPKVELQSIYGSK NS*DPKTKREVIQHNCQLHRISFCADDKT DKRMFTFICKDSESNKHLCYVDFSEKCA EETLTIGQAFDLAYRKFLESGGKDVE KQIAGLQKRIQDLETENMELGNKVQDLE NQLRITQVSAPPAGSMTPKSPSTDIFDMI PFSPISHQSSMPTRNGTQPPVPVSRSTEIK RDLFGAEPDFDFNCGAADFFPDQSKLDE M/QAPEMEGFGKMGILTLEGTVCLDPLDS RC |
| 1332 | 9383 | A | 2295 | 412 | 842 | GKVSPPGL*GP*GEQGPLGPSGAATGLP HSLCPEAFASPRSEYR*DAQALWAV PL*EGPL/PDLVRGVVPGSPVKVPGDEVR T/CHSCGRFPRALGQSKTLPPNPLTTRR GVNSEDLPSPVYRAADRGNRPFGA VGG SCHR |
| 1333 | 9384 | A | 2296 | 1036 | 1429 | GRAWRTPCPCRAHQPRRSHLRPSSCSTLQ RG*SPPPGRSSSPVQ*CA*ARGWGSFGP *HWTCLFLAWQSPQCTGPOICQYPRPLR SPRPAGPPGTSGHSPPDARAPRPRRPA CGRECSSSSGRNAAPLG |
| 1334 | 9385 | A | 2297 | 44 | 396 | |
| 1335 | 9386 | A | 2298 | 298 | 409 | |

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| 1336 | 9387 | A | 2299 | 123 | 1221 | KRQFLPLS WMAASGSRMAOQTWE LA NNMQEASQSIDEIYKYDKKQQQEILGGEA LD*GVRSHHYFKYCKNSALALLKMVM HARS/GEGNLEVMGLMLGK/VWDGETM IIMGKFFFCLEVTETRVN/SLQAAAYEY MAAYTIENANQVGSPEAIWYHSHPGV YGCWLSGDVSTQMLNQQQFQEPFVAV VIDPTRTISAGKVNFGAFWAHPK/GGYN PPDEGPGSGVPLGLFPLNKIEDLVHCKQY YALEVSYFKSLLGSQNCLELLWNKIKW GIRWSS/SLAGILLNADYPTQVL*FVLKK LEQSRSPSLGRGEFPCWGLETDRKSED KLAKA/ITRSSCKLPIEA/HGLMS/QVVKD KLFNQINIS |
| 1337 | 9388 | A | 23 | 3 | 438 | LFISLLSISEKIIENCWV*LSAARS*ALRKL AFF*ATRSEFF*ARDILGRHLLFF/CNFFLG LLFIDWILSYSSMSFLIHLHPAQQQAS TICCSHCQANLHTIFWQFVCRCADYHIP LYTGISNLTNDISVCHTNYHPVIGVW |
| 1338 | 9389 | A | 230 | 1216 | 2017 | HPRGAKYPETNPGFVTLVSVPGPSRQL THSRPSRSENACGHRPGELNWLNCSGCL LVPRGKRVWTETCNLVWKTEASGPPPG DPLPSLSPIHTQARPT/DQAHCPAPCP PH*PLALNPQONFCPEESAQVQGGEED RTSRGWWHGSOPQVGAGK*PLSTGSKA QGARLTGGGVSPRLR*EQALVRCRCRL CRLGSCVRSHSLKFIDEAGEAPSAAGLD GGGTGRAPGAPEARCPRAESGEGPGSG QAPAEQDPQPRALRA |
| 1339 | 9390 | A | 2300 | 2 | 433 | |
| 1340 | 9391 | A | 2301 | 1 | 2423 | MAGALAGLAAGLOVPRVAPSPDSDDST DSEDFSLRRSAGGLRSQVHSGHFVMS PHSDSLPRRDQEGSVGSPDFGRSIDPT LTRLFECLSLAYSGKLVSPKWNFKGLK LLCRDKIRLNNAIWRAWYIQVYKRRKSP VCGFVTPLOQPEADHRKPEAVVLEGN YWKRIEYVMREYHKWRIYVYKRVSGG GPGRPQSPFPAAAGYRPPRKIPGKGILTP ELAPLGPISQSRADSATVWPORLLAASLP RGRLKPSREDDLLAPKQAEGRWPPPEQ WCKQLFSSVVPVLLGDPPEEPGGRQLLD LNCFLDISDITLFTMTQSGPSPLOPPED AYVGNADMIOQDITLTPQPSLDDFMDISD FFTNSRLPOPPMPSNFPEPPSPVVDLSL SSGTLGPEVPPASSAMTHLSGHSRLQAR NSCPLDSSAFLSSDFLLPEDPKRPLPPP PVPPPLHYPPPAKQETVPEFCTFLPPT APTTPRPFPATLAPSRPLLVKAERLSP PAPSGSERRLSGDLSSMPGPTLSVYVSP POPILSRGRPDSNKALLGSFLGSPNSLLPE TENRRITHSAEQKRRFNKLGFDTLHGL VSTLSAOPSLVSKATTILQKTAEYILMLA QOERAGLOEAAQQLRDEIEELNAAINL CQOQLPATGVPHTHORFDQMRDMFD/D YVYRTRTLHNWKFVWVSSLKPMAGGLQ GLWQGSLLTWAQFSILIRPLESFENGMVS TASVHTLRQTSLAWLDQYCSLPALRPTV LNSLRQLGTS/ISLITDTPGRIP*/EQATRA VTEGTLGKPL |
| 1341 | 9392 | A | 2302 | 1 | 535 | |
| 1342 | 9393 | A | 2303 | 155 | 276 | |
| 1343 | 9394 | A | 2304 | 1 | 477 | |

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| 1344 | 9395 | A | 2305 | 221 | 2323 | LGLQMHTTSRIHQAMVTSLNEDNESVT VEWIENGDTLKGKIDLESIFSLNPDLVVP DGEIEPSPIETPPPPASSAKVNKIVKNRRT VAASIKNDPPSRDNRNVVGSARARSPQFP EQSSSAQONGSVSDISPVQAAKKEFGPP SRRRSNCVKEVDKLDQKREMKRLQQQE LREIRAQDQVDATHIPNYEIMCMIRGFTGS LDYRPLASADPIDEHRIYVCVRKRLPNK KETQMKDLDDVITIPSKDVVMVHEPKQK VDLTRYLENQTRFDYAFDDSAPEMVM YRFTARPLVVTIFERGMATCLAYGQTGS GKTHTMGGDFSGKNQDCSKGYALAAR DVFMLMLKKNYKLEIQVYATFFEYSG KVFDLLNRKTKLRVLEDGKQVQVQVGL QEREVKCEDVLAKLIDIGNSCRTSGQTS ANAHSSRSHAVFOILRRKGKLGKFSLI DLAGNERGADTSSADQRTRLEGAEINKS LLALKECIRALGRNKPHTPFRAKSLTQV LRDSFIGENSRCTCMATISPG/MWASCEN TLNTRLRYANRVKELTVDPTAAGDVRPIM HHPPNQIDDELTQWGVGSSPQRDDLKL LCEQNEEEVSPQLFTFHEAVSQMVMEE QVVEDHRAVFQESIRWLEDEKALLGD*L EEVDYDVDSYATQLEAILEQKIDILTEL IDKVKSFRAALQEEQEQASKQNPKRFRAL |
| 1345 | 9396 | A | 2306 | 264 | 451 | VLPNLTVHASPTTIKIWAGKVTHAYNPS TLGGQRGRIA*AEFKTSLSNIMGLRLSK KKKKK |
| 1346 | 9397 | B | 2307 | 1 | 642 | MLEEOLVRMLTREVMDLITVCCVSKKG ADHSSAPPADGDDEEMMATEVTPSAMA ELTDLKGCLMKHEVLSGTLADAVTWL FTSVLKGLOMHGQHDGCMASLVHLAFQ IYEALRPYLEIRAVMEQIFEQKDSLDQF DCKLLNPSLQKQVADKRRKDQFKRLIAGC IGKPLGEQFRKEVHIKNLPSLFKTKFPM ETEVLNDNGGLATIFEP* |
| 1347 | 9398 | A | 2308 | 3 | 101 | STHASENSFSCISILCFLEAPISLMYLSA SLEDQPWAWALCGGGRAPSTT*PPLSL* HL |
| 1348 | 9399 | A | 2309 | 360 | 483 | SMCLTVSMLVTACPADPCVT*A*NRSSF EVPPFTWSDLRFF |
| 1349 | 9400 | A | 231 | 5 | 399 | DGVSLVSPRLEYSGAISAHCKLRLPRFK *FSCLSIPSSWDYRHVPPPPANSVLVKT GFHIVGQAGLELLTSGDLPTSAFPKWCW DYRCDHCAWAKD*KFKCVSVGRGGP GEAVHQNSNRLSYWVEDGGKTG |
| 1350 | 9401 | A | 2310 | 100 | 190 | |
| 1351 | 9402 | A | 2311 | 2 | 193 | WRRRRRRFPQFQSLIWSGMRSPKLT PR*NYLRQALRRNLTLRPPFAETA WYQWCLGL |
| 1352 | 9403 | A | 2312 | 103 | 237 | |
| 1353 | 9404 | A | 2313 | 3 | 1361 | VETOEGKTTIIEGRITATPKESPNNPPSG QCPICRWNLKHKYNDDVLLLSQIRPH GGMLPRKITGLCQEEHRKIEECVKMAHR AELQRELOQLSPLPATQVYYQITGLGPLK ELFRANPNSTGPLAKAQQGYLTRWAP GSVKPIYKKGPRWNRGEANRKAHFTV QWPAPSAIAHAKDDVSPLOPTQCLLDNI KKKVVPVLSGRPGNTDSTCQESSIYLS QALAVTTFHTLTATAEQAEPSQLSPPPG LGEKPPADLVLQW/SEAPRAKHQYCTSP SHPAQRVSSSDSEHPAAASHPRPPRP GTNGWSRRGSCRASWSRDCSGVRSRV ALGMAMDOVNALCEQLVKAVTVMMDP NSTQRYRLEALKFCEEKKEKPCVPCGL RLAEKTQVAIVRHFGQLILEHVVKFRWN GMSRLEKVYPFEEQWSWNLIAKGFPHF GRGEPY |

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| 1354 | 9405 | A | 2314 | 138 | 397 | SHCPLSMHVGGTRPSWWGGTGV*LWPR AC/RVGLLLPSTGAGGTLEALLSVSDTAS KVFLLEARHCPSEGVNPTGHAHPVPSRG PFL |
| 1355 | 9406 | A | 2315 | 16 | 546 | QLNGRSIRHEVMSHRKFSAPRHGSLGLF PRKRSSRRHRGKVKSPKDDPSPKVHLTA FLOYKAGMTHIVREVDRPGSKVNNKEV VEAVTIVETPMVVVGVGVYVETPRGLR TFKTVFAEHISDE/CRLLPLRQKKAHLM IHVNGGTVAEKLDWARERLEQQVPVNP VFGQDEMIDVI |
| 1356 | 9407 | A | 2316 | 2 | 451 | PRAKAQKQSPVLWAQKSCPPKTTTRALA KVACIGAWHPARVAFSVARVGQKGYH PRTEITKJKYKIGQGYLIK/DGKLIKNNNA STDYDLSDKSINPLSLLVQTKRRALEKID LKFDITTSKFGHGRFQTMEEKKAFMGPL KKDRIAKEEGA |
| 1357 | 9408 | A | 2317 | 1 | 625 | CKFIRVMAHTRLLPLRREKKAHLMEOI VNEGTVAEKLDWARERLEQQVPVNVQV GQDEMIDVIGVTKGKGYKVTSRWHTK KLPRKTHRGLRKVACVKGKLIKNNAST DYDLSDKSINPLGGFVHYGEVTDNFVML KGCVVGTKKRVLTLRKSLLVQTKRRAL EKIDLKFDITTSKFGHGRFQTMEEKKAF MGPLKKDRIAKEEGA |
| 1358 | 9409 | A | 2318 | 1 | 1251 | |
| 1359 | 9410 | A | 2319 | 1 | 903 | |
| 1360 | 9411 | A | 232 | 481 | 525 | AAGTYSL*IGKE*VKLSLSVDSMLYIDN LKTLPKTLTTDKFSKISEYNISVFP*CI NDEKAKEIRKTIPFTIKR*NTSLTKKVKG LYKONYKTLMEINKWKDIPCA*IRRN IKIVYFK*TFKAISIKILLSVTIEKKIPK FINQKRIRIAKATLSWCNWLPMNSWHN RC |
| 1361 | 9412 | A | 2320 | 1 | 1341 | |
| 1362 | 9413 | A | 2321 | 1 | 1131 | |
| 1363 | 9414 | A | 2322 | 10 | 1304 | ESDGVTSHRKFSAPRHGTLGLFPRKRSSR HRGKAKSFPTDDPPKPGHLTGLFAYTAG MTHIVREVDRPGSKANTKEAGEAAATIVE TPPMVSVGVGVYVETPRGLRTFKTVFAE HISDECKRRFYKNWHKSKKKAFTKYCK K/WQDEDEGKQLEKDFSSMKKYCQV RVIAHTQWRLPL/RQKKAHLMEOI NGGCGPRSDWWAREKLEQQVPVNVQV PQDEMIDVIGGDPGAKGYKRGSPVR WHTKKAAPARPHPRACAKVOLVLA WHPGRVAFSVASRWGRKGLPFHRTINQ GRIFKDWPRATLIKDGKLIKQCLHLNY DLS*PRASNPLGGFVHYW*SDRDNFVM LKGCVVGTCKRGAHPFRKSLVQTKR RALEKIDLKFDITTSKFGHGRFQTMEEK KAFMGPLKKDRIAKEEGA |
| 1364 | 9415 | A | 2323 | 138 | 737 | TTIMSSKKAKTCTTKRPMQRATSNVFA MPVHSHQIGGVORGFPMIDQNRDGFHS DK/EKVLHDLMAFSREESPLDAYLDAM MNEAPGPHQVSPWFLTMFW*ESLNRD PLKIVIQKPFACFD*KKATRHPRERDYL /REELLINPWGDRVYQIEVG*CTGEAP I*QKGNFQITSEFHGILTRPPKHKDD LKELLA |
| 1365 | 9416 | A | 2324 | 2 | 307 | |
| 1366 | 9417 | A | 2325 | 2 | 215 | |
| 1367 | 9418 | A | 2326 | 1 | 213 | |

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| 1368 | 9419 | A | 2327 | 2 | 935 | FRPRYEGRRGCCGRVRLRRGLHVDC GKLGKLTSSCGPSSNRMSLQWTA TFLYAEVFWLLCIPFSPKRWQKIFKSR LVGVVSVPMGNTFFVLVLVILVLLVIE CRAAKPREVWMDVDGKRVNLPGTIPGG HGEALSHMEAFSVAPGGNLLHWLGFSL LUSFLRLRLVTLISQQAITLLASNEAFK KQAEK*VKAARKYMEENDQLKKGAP FDEGLNFENAEKLEKNRELKANLQ KLKDELQALSKKLEK*KTSFWPMRK QFMRGLTQ/ERYDRLEEQPKAAGLQV DGPMDKKEE |
| 1369 | 9420 | A | 2328 | 2 | 1217 | QARGASLRPSLLRIPSEYAFTMQLRLFR LLLAALLVIVWTLFGPSGLGELLTSL AFLPAPALPGPPLALPRLIPTQEACCGP GAPPFLLILGGTAPENLNQRNAIRASRG LREARGLRVQTLFLLGEPNAQHPVWGS QGE*TG*SESAAQGDILQAAQFDSYRNL TLKTLGSLNVAEKHCPMARYVLRDEDED GIANVPELVSELVLRGGRWGQWERSTEP QREAEQEGGQVLHSEEVPLLYLGRVHW RVNPSRTPGRRHVSSEEQVPHTWGPFPP YASGTGYVLSASAVQLIKVASRAPLLP LEDVFGVSARRGGLAPTQCVKLA/GAI THYPLDRCCYKGLLTSHKLDPWKMQE AWKLVGGSIDGEKDCAPFAPWFPKSL GILRCRAIAIWLOS |
| 1370 | 9421 | A | 2329 | 1 | 395 | AINYNEKIYELVRMETKPDKAVSIEHCD MNVDFDAP/LGYKEPERQVHEESTEGE ADHSGYAGE/LGFRAPSGSGNRLDGKKK GVEPSPKIPGDIKRGIPNYEFKLOEAG GRFVAFSGEGQSLRKKGRKP |
| 1371 | 9422 | A | 233 | 20 | 129 | |
| 1372 | 9423 | A | 2330 | 1 | 1494 | |
| 1373 | 9424 | A | 2331 | 2 | 1062 | GRAVGOVSSLHCPERSGVQCVVSIMFSF NMFDHIPPVVFQNRFSQYRCSLSML AGPNDR/SSIGEKEGKIMPPSALDQLSR L*HYRIPMLFKLTNRNSDRMTALLQCLE FVADEGICYFPITLWMMQNLLEVEGGLV NQKSVNLSAATLLPNFQPSADFLADITN PKAVFEMALRNFACLITGDVIAINYNE KILRNCVVMETQTPTRPVSHH*SVNH* VDPDFPLGLPKNPGTKSHHEESEQKV KADPTVAYAWKSLGPPRFSRGSQNR/LD GKKKGVEPSPSPKIPGDIKRGIPNYEFK LQKITP/VSRSNRPLVKVEEDEAGGRF VAFSGEGQSLRKKGRKP |
| 1374 | 9425 | A | 2332 | 1 | 214 | APARSALCSGSAPRTSQGPWGTA PAPPS FHQRNTPCPWSAPPSGAAPWGSTKGQR LDGPCCAPFPRLGLSM*SKVPWPA*TA PAPPSFHQRNTPCPWSAPPSGAAPWGST KGQRLDGPCCAPFPRLGLSM |
| 1375 | 9426 | A | 2333 | 1 | 1515 | MAPLQQHIAVLPTDTADQVTTEDDGYT WTALQHVATAKEKRKSSQIMEESQDFF LHIPRPAQGTQRAVARPSGPKAWTEAG PAKDAARSEKPGGRKAPGGRGQLTCRR SLSPVRQPPVSVVSDSLRRRSPCSPADW REAGATSLDRIRPILVLMVDKKLVVVF STGAQGSVARILLEDGTFKVRVVRNRP RKKAAKELRLQGAEVVQGDQDDQVIME LALBWAYATFIGTNYWESCSQEVEVTP A/GSLDRIRPILVLMVDKKLGLHYVVS GLGTSRS*RGQDWPPTLTAKGRWRNI SGTLAF*PVWGFLANLNLQLQFFPR KTPGKELLCGACQPVTPWMAACPCLT WGPVVLSLFEDARKIRRPHEHG*ALAGT RPRSTLPCSPSTPARSCIMPR*LPEDYEK LGFPGARDLQHVPLCPETPTDRI/PSLT LRLNPKALTLDQWLGTQARGLQPAVTL |

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| | | | | | | PASRPLVGIRGHQRKKAPTSEIKPICSPK KKKK |
| 1376 | 9427 | A | 2334 | 3 | 1037 | ILRSVARAQGRRLSRFHWSGGHGGRS EAGAAGP/VEMRCTAAPQGRVPGL/PS KLGIPDALPTVAAPRFVQCQGGPLIAL VVQVYCPLEGSFPHRLHVFACAPGCS TGGARSWKVFRSQCLQVPEREAQDAQK QGNLSAAEDWCEGADD/CGK*Y*GGAF TVYLGWE*CCQC/HKT*GTLGSKTS/C LQDAVLGAHAHPVPPGLPLFLPYICVAD EDDYRDFVNLDAHSLRLRDYQOREGIA MDQLLSQSLPNDGDEK/S*EDHN*KVGG SRPF*QIP*KRNWLLVREQILRVFPGVES HSF*PAPTSEVTELPQLQPVWEAKRIFEF QLMPALGOHASRVLI |
| 1377 | 9428 | B | 2337 | 240 | 387 | NGKERGTGDVKLLKHKEKGAILLMRR DKTLKICANHYYTPMELKFNAX* |
| 1378 | 9429 | A | 2338 | 1 | 152 | |
| 1379 | 9430 | A | 2339 | 1 | 830 | MRRPRRLCLWLRLCECGLQSRSAVG NSEEQRKAYVFFSSLSLVDTHEDHDTST ENTDESNDHPQFEPVLSLPEQEKLEED EELFKMRKALFRFASENDLPWEKERG TGDVVKLLKHKEKGAILLMRR/DKDP *KICANPLSPRLMGAESPTAGRRSPVW VLETPHADFRNPCEPPSPELPGPFRFLN A*RMPQKFNQSFEELOGKRSEGEKEEKE SRFQGNDSL/HRKCKAEKPGSSLR*REE TKEDAEAEAINRJLLSFSSLSLS |
| 1380 | 9431 | A | 234 | 16 | 370 | |
| 1381 | 9432 | C | 2340 | 392 | 631 | MRTAESCRRLSWAALLGSHWRCCSHPC AAGQGPYPRAAVNGPRTPLAYLRFKEM FSSGLINVEFPQFLYLSHFHSLLR* |
| 1382 | 9433 | A | 2341 | 3 | 121 | |
| 1383 | 9434 | A | 2342 | 1 | 2970 | |
| 1384 | 9435 | A | 2343 | 48 | 1493 | DGQYRIWWLIEWHVDGGCGDDETWDK RWNVHVKKFLERSGPTTHDPFESTESL QFLDTCVKVLVIGAGGVGCELLKNLAL SIGFRQHVIDMDTIDVNS*IRQFLFRPK DIGRPKAEVAAEFLNDRVPCNVVPHFA NKUQDFMDTFYRQFHUVCGTGLSCA RRWINGMLISLNLNRYMVS*DPSSIVPLI DGGTEGFKENARVILPGMTACIECTLE LYPPQVNFPMCTIASMPRLPEHCNEYVG MLQWPKEQPFGEVPLDGGDP/EHIQWI FQKSLERASQYNIRGVTYRLTQGVVKRII PAVASTNAVIAAVCAT*EVFKIATSAIPI L*ITWVFNVDVGLYTYTFEGRGKLEN CPACISQLQNISVFLHQAKLQEVLGILIT NSASLQNEILPAITATLGGEKIGTLYLOS VTSIEERTFNPISKTIGRIGGLDGPKTG RLLDVTTIPQTVLFQTSILLKKGSEPT |
| 1385 | 9436 | C | 2344 | 166 | 312 | |

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| 1386 | 9437 | B | 2345 | 355 | 487 | MLGLRSGIPAPVRLQLAVVLGNLSLGNFG TEGPGLKGRMTMVTGDPX* |
| 1387 | 9438 | A | 2346 | 754 | 1035 | GKVRTVKIKYWMRLARSSGSSL*SQHFGR LRQADHEVQEIKHHPGKHSANPISLKI QKVS*LVSQAWWVVPVPAIREVEAGE WCEPGRQSLQ |
| 1388 | 9439 | B | 2347 | 80 | 432 | MANGPRAXFCENFQAALALSRVGLHKN PEKEPYKSKYSARALLEEVKALGPAPPE DEDERPEAEDGPGAGDHALGLPVAQRA VRLAVIEFHGLGVNHIDTEELSAAGEHLVK CLRLRLRS* |
| 1389 | 9440 | A | 2348 | 2 | 1060 | HWLSTANVISDYYDKSSPTQDTAETV*D TPELYHQGKGEIARCWIKYCLTLMQNA QLSMQDNI*ELDLKQSELIARKKELDE EESIRKKAQVFGTGELCDASIAIEEKVSY LRPLDFEEARELFLGQHYVFEAEFFQI DGYVTDHIEVVQDHSALFKVLAFFETDM ERRCKMHKRRIAMLEPLTVDLNPQYYL LVNRQIQEIAHAYYDMMDLKVAIADRL RDPDSHIVKINNINLKSALKYYQLFDS LRDPNKVFPFHIGEDVLRPAMLAKEFRVA RLYGKIITADPKKELNATSLSEHYKFIY DYCEKHPEAAQIEVELELSKEMVSLFP TKMERFRTKMALS |
| 1390 | 9441 | A | 2349 | 11 | 2571 | VKCRKAEGRRESRLQTFESQAVEAAM ANVPWAEVCEKFOAALASRVELHKNP EKEPYKSKYSARANMEEVKALLGPAPPE DEDERPEAEDGPGAGDHALGLPAEVE PEGPVAAQANRLRLAVNEFHGLGVNHIDTE ELSAAGEHLVKCLRLRLRYLSDHICSLC IQAQNNLGIWVSEREEIETAQAYLESSEA LYNQYMKVEGSPPLDPTERFLPPEEKLT VEQERSTRFSKYVTHILYLAQVYQHLE CFETAHYCHSTLKRQLEHNAHYPIEW AINAATLQFQYINKLCFMEARHCLSAAN VIFGOTGKISATEDPSEGEVPELHYQR KGEIARCWIKYLF*LLMQNAQLSMQDNI GELDLKQSELRLARKKELDEEESIRKK AVQF*GTGELCDASIAVIEEKVSYLRPLG FEEARELFLGQHYVFEAEFFQIJDGY VTDHIEVVQDHSALFKVLAFFETDMER RCKMHKRLGLAMLEPLTVDLNPQYYL VNRQIQEIAHAYYDMMDLKVAIADRL RDPDSHIVKINNINLKSALKYYQLFDS LRDPNKVFPFHIGEDVLRPAMLAKEFRVA VRLYGKIITADPKKELNATSLSEHYKFIY DYCEKHPEAAQIEVELELSKEMVSLFP TKMERFRTKMALS |
| 1391 | 9442 | A | 235 | 1 | 1125 | |
| 1392 | 9443 | A | 2350 | 1 | 421 | GTVMGLPKFYISLSTKFPFLSFLSADEL HIASLFLWPRSKPFGVIQRSCASQLNALP EVLKKNPGDPKMLRFAESPRNLPAQV/L GDIWTDGKGSVSLQEQVYHFLRPTFGS *ARASFLSCG*EEFRRHGLTFSSSTRE |

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| 1393 | 9444 | B | 2351 | 211 | 1632 | MSTELFSSTREEGSSGSGPSFRSNQRKML NLLLERDTSFTVCPDVPRTPVGKFLGDS ANLSILSGGTPKCCDLNLSNGEITATQ LTTASDLDETHGLDSSGLQEVHLAGMN HDQHLMKCSPAQLLCSTFNGLDGRHKK RDAMCSSSANKENDNGNLDSEMKYL SPITTVPKLDKNPNLGEDQAEISDELME FSLKDQEAQVSRSGLYSPSPMPENLNR RLKQVEKFKDNTIPDKVKKYFSGQ GK LRKGLCLKTKTVSLCDITITQMLEEDSNQ GHLIGDFSKVCALPTVSGKHQDLKYVNP ETVAALLSGKFGQLEKFFVIDCRYPY LGGHIQGALNLYSQEELFNFLKKPIVPL DTQKRNIIVFHCFESSERGPRMCRCLREE DRSLNQYPALYYPELYILKGGYRDFPPE YMELCEPQSYCPMHQDHKTLLRCRS QSKVQEGERQLEQIALVKDMSP* |
| 1394 | 9445 | A | 2352 | 200 | 1525 | IMASAHLAITSFACTRSSSSGRSGCKRGS WDSEQUALIRAWTILPSSLHAADGSFAGG RGIPSKRWSWRAQGOSSLCIMQTSNCS GNSPQLYSEGASWRGLPHCSCAELQDSL NFSYHPSGLSLSVRFPSPGNSPKEQPFSSQ VLRPEPPDEKLPVPPAPPSKRHRCSLSV PVDLSRWQPVWRAPSKLWTPIKHRGS GGGGGPQVPHQSPPKRVSSRLFTLSQCC LFSMCPSSTQLPSPFLQPGGPGSSSRPCA ASPGQSGWESDAESLSPCFQRRFLSPS LGPQASRFLPSARSSPASSPELPAT*G/L SATFPFSRSQPCDLDAKRTGVKRRHEED PRRLRPSLDPDKMNQKPYSGGLCLQETA REGSSISPPWFMACSPPLSASCSPGTGSS QVLSESEKEEGAVRWGRQALSKRTL QRDFGDLNLNIEEN |
| 1395 | 9446 | A | 2353 | 2 | 280 | |
| 1396 | 9447 | A | 2354 | 2 | 971 | |
| 1397 | 9448 | A | 2355 | 604 | 876 | SLHHKDFTGMLLQFAHHLOEIGFSLIS PKSRQPLFLPSVRQCGAAAA/RRCYRL APRPVCSGKRRTAPGAGD*GGERARPPR ARVFCPR |
| 1398 | 9449 | A | 2356 | 1 | 1042 | DLFRRHFKSSSIQSRSAATAATRTARQH PPADSSVTMEDMNEYSNIEEFAEGSKIN ASKNQDDDGKMFIGGLSWDTSKKDLTE YLSRFGEVVDCTIKTDPVTRSRGFGFV LFKDAASVDKVLKELKEHKLDDGKLDPKR AKALKGKEPPKVFVGLSPDTSSEQIK EYFGAFGERENIEFSMDIKTNER/GFCFI TYTDEEPVKKLESTYHQISGKCEIKV AQPKVEYRQQQOQKGGGAAAGGRG GTRGRGRGQGNWNGFNYYDQGY GNYNSAYGGQDQNSYGVGYDVTGYN YGNPMEYGRGYQTYQWPPQSTLMG KVASRGGGQSTONNYPAHT |
| 1399 | 9450 | A | 2357 | 586 | 1970 | POEFTPLRSLILLFSQARVPSRVASILLA GRAAMEVPPRLSHVPPPLFSPAATLASR SLSHWRPRPRLQAPLLPSLAPSSARQG ARRAQRIHYTAQQFSRLAGGAIAKGGRR RRPDLFRRHFKSSSIQSRSAATAATRTA RQHPPADSSVTMEDMNEYSNIEEFAEGS KINASKNQDDGKMFIGGLSWDTSKKDL LITYLSRFGEVVDCTIKTDPVTRSRGFGF VLFKDAASVDKVLGT*KGHKLDDGKLD IDPKRAKALKGKEPSPKRFLWSGLSPDTS NEQIKIEYFGAFGEIENIELPMDIKTNER RGFCFITYTDEEPVKKLESLRYHQHGS KCEIKGCTTPKRYLQGOQQQPPKCGK/RG AAAGRGVTRGRGRSQGQNWQGFNN TYDQGYGNYNSAYGGQDQNSYGVGYD YTGYNYGNYGQGYADYSQQQSTY KASRGGGNHQNQNYQY |

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| 1400 | 9451 | A | 2358 | 592 | 608 | WLRWATYIKAGQPQLEAQNPSYFREGQ PFLRLDHLRTAGAEQNCNAAVWVRRL* RNMGFVLLTGAASFIMVAHLSHQCSQG PAKKVPKWEYPYCTATEPNNGHHPST CIQAKPHPRNTYGVK*PSPSLFFPSLLGG VYHPAV*ASWPWAWPWICWTEFLYAY GLLHGENPSKRSPRSPWGSALLAFGWG TTVCSGFP SILVWVKSLGLGQVEPKCCH LKKL |
| 1401 | 9452 | A | 2359 | 857 | 1343 | SFRISSEFGITFKIVSFGIMAQTHAMGQFF ERNNSVP*LTQGEIENLNRPIPVKL/ESITNN LL**KAPGLDGFIDD*SNIEINL*PRNISL KFFFLRKKS YQFSTIAKKIEAKGTHPN* L*ETSITLILKSDKDMTRKGLQSLINIDA KILNKILANQM |
| 1402 | 9453 | A | 236 | 426 | 2173 | MRAQTHNRAVDIALGTAGAHLEDPGAQ QQQDRCSWQVCSARRRRRREAAGRR AARRAQHPCCREPSNGQSLSAHLHTGAT KGPASSLLHEHLWKPIARSARLPQNSPL FSAPCSMGAGPSLLAALLLLSGDGAV RCDTPANCTYLDLGTWVQVGSQSQ RDVNCVSMGQPEKKVVVYLKLDATAY DDLGNFGHFTIYNQGFIVLNDYKWF AFFKYKEEGSKVTTCNETMTGWVHD VLGRNWWFFTGKVKGTASENVYVNTA HILKNSQEKYSNRLKYDHNFKAINAIQ KSWTATTYMEYETLTLGDMIRRSQGH RKIPRPKAPLTAIEIQKILHLPTSDWR NVHGINFVSPVRNQASCGSCYFASMG MLEARIRLTNNSQTPILSPQEVVSCSY AQCGEGGFPYLIAGKYAQDFGLVEACF PYTGTDSPCKMKEDCFRYSSEYHYVG GFYGGCNEALMKLELVHHPMAVAFEV YDDFLHYKKGYYHHTGLRDPNPFELTN HAVLLVGYGTDASGMDYVWVKNSWG TGWGNGYFRIRRGTDCAIESIAVAATP IPKL |
| 1403 | 9454 | A | 2360 | 84 | 326 | DKAYQCSDCDK/ELHSVTLVSR*SVLSM HQSIHIWKKKLCFLK/CHKAFSQ*SALII KQRIHVAQII*ICCIWESLQPEVV |
| 1404 | 9455 | A | 2361 | 635 | 1170 | RLFKCILGLLTFPPDSSHPLPGESPQSE KSRCPGCWPHPAQPHQSRWAGACSSY SGVLQG*EPOI*SLOHGRGGGRTTGLE KETRTGSRISDIALGG/EAGPCPGQLPH LPGPAAHDAQPYIP/PKGPGGSGYLHP HGSAKLGSNOGAMKQAGRTGSAGSQ SAEFHKAALWT |
| 1405 | 9456 | A | 2365 | 2 | 333 | EPVCATWKNRTPETPRQCRPAEKORASA TQHQEQPGQWKPRRSSDPHPHPRGFS THDVS*PKITNCREAKGEEAGSLPTGT GIGGSKPNRLRSTHTTPTGTIVNT |
| 1406 | 9457 | A | 2366 | 208 | 491 | KQSQVWCVLWSEGRLLGLDPNPSACG GDRLS/RTSAVPPVP*S*NSSAHGPGGR GKPGQWG*TVTSGRSVAGKPGVPSNR CFLPPHPWLLDN |
| 1407 | 9458 | A | 2367 | 2 | 1010 | PQPAQPCPGKELRTVNGSQMLLVLLVL SWLPHWGAALSAEASRA/SFPGPSELQ LRRTSKIPKSLRKYEDLLNPGCGPNQS WEDSNTDLVPAVAVRJLTPVEVLGSGG HLHLRISRAALPEGLPEASRLHRLFRLS PTASRSWDVTRPLRRQLSARPHGPAH LRLSPPSPSSQSDQLLAESSARPQLEHL RFPQAARGRRRARSNGDCHPLGPRCC RLHTVRASLEDLWGA/WVLSPREVQ VT/LCAIGACP/SQFPGRQKMAHQESKTN PAPALKAPNTVPRK/PLVPRQLQPWVL HSKRPTDGYCFQDL/SD*LYKPKTCHLH Y |

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| 1408 | 9459 | A | 2368 | 68 | 430 | HVLTAHPPHRLGPGPQGRSGMGREL VGPVCLSSLFRLAASFPRPVLGPQV QVYNKGCWPCRGYGEQTAPQPPS*VG DPGEJNPQAFGAQSSTPKPAHIPPPTQEA GRRWEGKWWF |
| 1409 | 9460 | A | 2369 | 694 | 872 | VCPGTGGG*GLWGQLGGLPKETPLKPM DAFTGSGLKRKFDVDVGVSSVNSDDEI SSSDSADSCDLSNPPTTASFPTSLKRQK QLRRKNVRFDQVTVYYFARRQGFTSVPS QGGSSLGMAQRHNSVRSYTLCEFAQE EVNHRILREHLKEELHAKMKLTKN GTVESVEADGLTLDVSDDEDIDVENVEV DDYFFLQPSAIPKRRRALLRASGVHRIDA EEKQELRAIRLSREECGDCRLYCDPEA CACSQAGIKCQVSURMSPPCGCSRDCG GNMAGRIEFNPVRVTHYLHAIMKLELES KRQGAQAQQA*GALPDCQLQPDRTGP *DPLTWHLIPAWLQAHASGSQYSRQSQ HSSRRRMRSSCFSSASIRCTPEALSRA RLRLVGRWLQEEVHILHIFHINIFI |
| 1410 | 9461 | A | 237 | 3 | 463 | GTRFLHSFLSLKHGCGPSLLAALLLS PGDGAIVRCDTPANCTYLDLLGTWVPQ VGSSGSQRDVNCSVMGPQRKKK*VY LQKLDATAYDDLGNSGHPTIYNQGF VLNDYKWFAPFKDVTDFISHLMQLGT VGIYDLPHLRNKAGY |
| 1411 | 9462 | A | 2370 | 2 | 295 | |
| 1412 | 9463 | A | 2371 | 2 | 345 | |
| 1413 | 9464 | A | 2372 | 156 | 1437 | GIETRRPWGRPYVAWLLVVM DALVEDD ICILNHEKAHKRDVTPVSIIL/PGEDEVAI SHFALVTPYEDIKKRLKDSRKRTSFLKK RIRFLEELK/GSDLKKKQVT*GRE/QVYNK AYHAYREVCNDRNLKSKLDKMNKDN SESILKVLNEQLQSKVEVLLQLRTEVETQ QVMRNLNPPSIQTGEVGKVGAGDLKIH GFGNQELELMRKECSDLKIELQKAKQTD PYQEDNLKSRDLQKLSISSDNMQHAYWA ELKERKCLNLHLVTSSYKLELLRKT*KT STAIKKACAPVGCVEDLGRDSTKLHL DGFLLATYARHPPLLPNKALCHTTSSP LPGDVKVLEKAILQSWATDNERSIPNDG Y/DAFREHSSYQONSLEDNSWGFQSPFK /SQSETAFGETKTCTLPLNPLPHYLDQ HNQNLCKYN |
| 1414 | 9465 | A | 2373 | 28 | 405 | FLYDPAPPFLSIYPKELKVES*IDTCTLIFI AALF/LIGKRWK*PKYPLTDEWKNV/WY INTIEYY/SHLKRKDLTHYTTWVNREDLI LSEISQSQINTVESTYMRKYISNS*ISIG TSYKSHRV |
| 1415 | 9466 | A | 2374 | 1414 | 1607 | DRVSLWLPLECSGAISAHCNLCISGLS NSPTSASRVAGTTGACHHTLLI*FLFVFW VVV*ETES/HLWLPLECSGAISAHCNLC FSGLSNSPTSASRVAGTTGACHHTLLIFV FLVEMGFHHVVGK |
| 1416 | 9467 | A | 2375 | 558 | 985 | KKDPRWALYSLYVYKFLHFSYSSAKNP DCGCFQKVLNGFTKFFCKEQYCKLLKLY FYRLFALLWLCLSGFLKFFFYSEIMELV LAAAGALLFC/GNFIIYDTHSLMHKLSPE EYVLA AISLYLDIINLFLHLRFLAEVANK K |
| 1417 | 9468 | A | 2376 | 664 | 937 | VLLILFSNINIFI*SLPYSFFFIGEDNGSWV LAAAGALLFCGDSSSMDTHSLDGNWS PEEYVLA AISLYLDIINLFLHLRFLAEVANK KK |

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| 1418 | 9469 | A | 2377 | 1 | 739 | DPTPVTPRSSLKNDSTNGSSVASATVHIE WAFRLKVVYSILSQVLTTVTSPVFLYF ESVRTFVHESPALILLFALGSLGNFALT LNRHKYPLNLYLLFGFTLLEALTVAVV VTFYDVYIILQAFILTTTVFFWFCVYS YQSKKDFSKFGAGLFALLVG*CLLSGF LKVFFFYSEIMELALAAAGAPPPVDFII YDTHSLMHKLSPPEYVLAASLYLDII NLFLHLLRFPQSLNKK |
| 1419 | 9470 | A | 2378 | 272 | 1668 | AMSQGSVTFNRDVAIDFSQEEWKLQPA QRDVYRCVMLENYGHVLSLAGLSISKPA DVVSLLEBQGEKPVW/GKREVKRDLFS VSESSGENQGLFHQKNVIYDGLHPSI*IM ERNRSKVAPVYSSFGKGWCKDHTTEML QENQGCIRKVTVSHQEALAQHMNISTVE RPYGCHECGKTFGRRFSLVLRHQRTHTGE KPYACRACGKTFQSISNLVKHQMIHTG KKPHECKDCNKTFYSLSFLIEHQRTHTTG EKPYECTCGKAFSRASNLTRHQRIHIGK KQYICRCKGAFSSGSELIRHQTHHTGEK PYECIECGKAFRRFSPLTRHQSIHTKTP YECNECRKAFRCHSFLIKHQRIHAGEKL YECDECGKVFTWHASLIQHTKSHTGEKP YACAE*NAFASRSFSLILHQRTHTGEEP YVCKVCKNSFSWSSNLAKHQRTHTLDN PYEYENSFNYSHSLTEHQ |
| 1420 | 9471 | A | 2379 | 1322 | 1644 | HLEFLGIRGKMFVGTWNE*EEKAGLN GSRL*SQHFQKPRVWDH/LRSGVRDQSV GQHGKTSLLQKNKTSWAWWRAPVVP AT*EAEVGGWLEPRGGCGSEAVSGAF |
| 1421 | 9472 | A | 238 | 12 | 362 | DRVSLLSPRLCNSAIPAHNCNCLP/GFK QFSCLSLSSWG*RCPLPRLANFLY/SLVE IQFHVYQOAGLKLLTSCDPTSA/FPKCW DYRHEPQ/WPDL*LTSE*GYRYDESDFL PKVPI |
| 1422 | 9473 | A | 2380 | 319 | 724 | EASLDLAPNISPPKTSCLPTGCCSFTQT WMPQSKVFIHQGEQGPWDWALGTDLTA LPFKARNMPNLDAGLPSIALRLTVNHR RSPOSQELSCLPDSCLSQ/PPQPC*GSLLP LEYKCTPKALRK*KRLSFLFV |
| 1423 | 9474 | A | 2381 | 38 | 704 | SSEEEQSFSSWHQGEPAVATWKLWPK VPPRWRFSHFPLDSPWHFLQTAVTPLP QISAAPPKPLLPPTSPLAFFSSLLTDLPSYL HPQGSAGATA*NKASHNRLALQSHS SPEGKEEP*TPYPELEYIPRRKGNPHG KLVTGLGHSAPCGYSFLFHPSPKRG GTRDRVEGRLLARQNRVCSNN/AGEYE EARRFKGLSSQSGPVPPDVGSGVQT |
| 1424 | 9475 | A | 2382 | 107 | 449 | |
| 1425 | 9476 | A | 2383 | 68 | 422 | |
| 1426 | 9477 | A | 2384 | 54 | 859 | LRRGRSRETNEEPPPTVQVQGPQOREE KQKTKMAKFVIRPATAACDSDLRLIKEL AKYEYMEBQVILTEKDLEDGFEHPFY HCLVAEVPKEHWIPEGYSL*LRHVHG VYMDGRGGN*KILYTIK*MIMINEDTAL VGFAHVLIYPMNPWDWQSYLYLEDFS VMSGYVGLGIGSEILRNLSPGCQ*RCRCS SKHFLVAEWQ*THPITFYKRRGASDLS Q*RRGWETCSKJGGSTWLKJGQPEGVR ECCLLGWTTSHSYF |
| 1427 | 9478 | A | 2387 | 112 | 861 | NPGAAKMPAYHSSI.MDPTDKLIGNMA HL.LPIRSQFKGAPAKRDRTRIPDIVDEAIFL PSGPNVFFKNYIEKNEADRTLJIYITLYISE CLKKLQKCOFPKAQGEK*EMYTLGIPLN FPIPGEPGFSHFANLCPNPANKQDEE VMRAIYPLSLRPTLGLKTL*EKFFG RMDKPOQSGWTVLC*RDSFMNKSLS PWTIEREPGAAHRLPRGPAAFPQODVT QSFLYFSKVIQKRRRACLYLKNS |

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| 1428 | 9479 | A | 2389 | 1 | 395 | AKAKMADVLDLHEAGGEDFAMDEGD ESIHKLKEAKKKRGRGFGS*VWVKW GRVA**GRSYGFWSPPHRRNNGRKEEF SVISCMSLIEGSRARMREDYDSVEIDG DEFGPQRSVEGWILFVTGVHEEA |
| 1429 | 9480 | A | 239 | 3 | 153 | |
| 1430 | 9481 | A | 2390 | 146 | 831 | CLSGTDEISIEGEMADVLDLHEAGGEF AMDEGDDESIIHKLKEAKKKRGRGFGS EEGSRARM*DYDSVEODGDVPGPQRS VEGWILFVTGSP*RKPEEDIHDK*ARIM GEIKNISSSTFDRRTG/YILKGVTLSNIET YKBAQAAMEGLNGQDLMGQPSVDWC FVRGPPKIGKRRGRRRSRSPDRRPSLT GPLLSRCSLQDSIWTMAALGQIGLOWEL CCVYI |
| 1431 | 9482 | A | 2391 | 2 | 442 | FYVILISVRELYLCHHLPFCAGVYMTNS AMKVFLIWL/VIVKITVLEFKLSWPGAV VWF*GLILYTHI*TL/NTHI*VQNVYCYIL QRNK*FHRFCINIKSWLGAEPHACN*STL GG*HS*IT*AOKFETSLGNIVRPLCYKYY KN |
| 1432 | 9483 | A | 2392 | 2 | 425 | RRANPPSISPSAQDSRVTVFPGEGPSP/G* PSRPVS/GPA/PGSGGLRGSSAPATPLGE APSPSA/GPTPALQPCDPGAGP/GTARPG QTASAAAPLPPRRGAGAPPQAGREGG PGEEERPSPGREKVSC*KRTGPGQRR ADK |
| 1433 | 9484 | A | 2393 | 2 | 662 | ACTAADLIAGTTISEAGPHMENQP/GEVA GPAGPPTPSWAPRIPLAPPWRAAAGRDP AT/QQEDSQ*PTPGCPSWPWTQLSPSA AGSPHITVPIQGFHSQLLS*RSPTGEPP*E ANKLPPTWTHREPEPHPLGPHGCAAGS IGHWHILLICPLATLHGERQRHLHPGQR SGCGVQGRTPPSAQQLDPAAPSSILQN LSTQLCSAARPSMPSARMRM |
| 1434 | 9485 | A | 2394 | 115 | 187 | |
| 1435 | 9486 | A | 2395 | 93 | 584 | KHSASAAQALPOTLGACTGSGGLRGSS APATLGEAPSPSAVGPTPALQPCDPGAG PVLPGQVKLPQGP/APLPPRRGAGAPP PEIPSGSSFOGYWEGGAOTGILLPAQRFL PPPPALGSGCSALEE*ATGTRGHKGS CS*GLWGEPRGACKHPHLL |
| 1436 | 9487 | A | 2396 | 46 | 438 | LQKRVGDWLGEPAPWGWVSHRCRAR TARPGQTASAAAPLPPRRGAGAPLAR VPAPPCCAQAPPSSSQGRNQ**AASGP WRPPR/PGREVGTGGEERPASGREKDS C*EROTGPGQRRVAKMTQITR |
| 1437 | 9488 | A | 2397 | 455 | 1241 | ARELRAGGFYVPHRGLEMPETALEAG VSGVGLQHLPH/HLGEAPSPSAWPDQTR CSRVPVQGPVLPQGVKLPQ/PPAPLPP RRGAGAPPLRDLARVPAPPCCAQAPP SSQGRNQ**AASGPWRPPRAEKESNC GEEERPASGREKDS*ERQNGARSAAGR QAKESPQTSRPPDGEPACEVAGPAGPPTP SWAPRSLAPPWRAAAARDPATGRRTV SDPHERPAHHGLPGQHSYLLQLQDILSH SPIQGFHSQLLS |
| 1438 | 9489 | A | 2398 | 2 | 328 | PLFSDNGKKRGLALDGKCLKHEDTNLASS TIVKEGANKEVLGILVSRYRVKLVVSR GGAAPETDVPDITNLIEFDITNYATDDIV FEDFARLRLKMGKDDDDYDDQSTRP |
| 1439 | 9490 | A | 2399 | 2 | 417 | EIRAFCAKSL*KSHKRNSVRLVIRKVOF APEKPGPQSAETIRHFLMSDRSLHLEAS LDK/EVRQYADICLFSTAQYKCPVAQLE QDDQVSPSSTFCKVYITILLSDNREKRG LALDGKCLKHEDTNLAFSTIGKEGGH |

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| 1440 | 9491 | A | 24 | 497 | 752 | DGVLLLLPRLECNAILAHNRNLRP/GFK RFSCLTILSPWDYRHLPPRIAIFFVLVY VGFHHVGYAGLEWLLTSR*SARPRPKIA |
| 1441 | 9492 | A | 240 | 3 | 423 | GSTHASARMAVMAPRTLLLLSGALAL TQTWAGSHSMRYFYTSGRPGRGEPFI AVGVYDDTQFVRFDSDAASQRMPERAP WIEQEGPEYWDQETRNVKAQSQTRVD LGLTRGYYNQSEDGSHITQIMYGCDDVGP DGR |
| 1442 | 9493 | A | 2400 | 188 | 340 | GGALLKDPLGGPNLPGGGKDKFFSFWG AF*NPPGDFWEGTFFLGGGILGP |
| 1443 | 9494 | A | 2401 | 117 | 437 | |
| 1444 | 9495 | A | 2402 | 39 | 447 | |
| 1445 | 9496 | A | 2403 | 3 | 1359 | PPGRRFRGGAGILAAGEEAASEPRTERA AGARTMGKPGTRVFKKSSPNCKLTVY LGKRDVFDHLDKVDVPGVVLVDPD/Y TMKDRKFVFTLSPCAFRYAGREDLVL GLSFRKDLFIATYQAFPPVPNPPPTRL QDRLRLKLQHAHPFFFTIPQNLPCSVTL QPGPEDTGKACGVDFEIRAFCAKSLK GHKGTSVRLVIRKVFAPKPGQPQSAE TTRHFLMSDRSLHLEASLDKELYHGE LNVKCSSTFTNNSTKIVQGRFKVSC*GQ YADIWPLSGTAQYKCPVAQLEQDDQVS PSSTFCKVYITITPLSDNREKPCIALD KLKHEDTNLVSSITVKEGANKEVLGILV SYRVKVKLVVSRGGDVSELPFVLMHP KPHDHSLPRPQSAAPETDVPVDTNLJIE DTNYATDDDIVFEDFARLRLKGMKDD YDDQLC |
| 1446 | 9497 | C | 2406 | 933 | 1070 | MKRKNILNYGTNKLNTNNLNNFINI LVSSGLSERSFYRIL* |
| 1447 | 9498 | A | 2407 | 138 | 1166 | VVAMAQVLRGTVDTPGFDERADAETL RKAMKGLGTDEESILTLTSSRNAQRQ EISCS/AFKTLFGRDLLDILKSELTKGF EKALIVALIMKPSRVL*MLIELKHALKGA GTNEKVLTEIASRTPEELRAIKQVYEE EYGSLLAD*RWLGDPGYPAGCWLVI LLQANRPDPAGUIDEA/QVEQDAQALFIQ AGELAKWGTDEEKFITIGTRSWSSF*GK VFDKYMITSISKLRITDRETSQGRFSQ LLLGCCGILFRYTSPTLQETFIYAMKEA GTTDDHILRVMVSRSEIDLVIYIGREFR KNFCHPPPYSMIKGRYIWGTIKALLAL CGEDD |
| 1448 | 9499 | A | 2408 | 1 | 498 | |
| 1449 | 9500 | C | 2409 | 14 | 394 | |
| 1450 | 9501 | B | 241 | 1 | 540 | MPVNVKHKRHDITAESLITPNVTTDSVKD CIKELGNRLFLWTQCCSHVATVAPPTA PRGLRVSRAVRPLPGGWAAAMEGEP PVEERRRLQEELNFFVESGCRILEEVTAS LGWDLDSLDPGEEAAELHQIRQCESWE FASSPFCALKLDTSDWDSSTNSRIKGCHQ EVYTGNSCGH* |
| 1451 | 9502 | A | 2410 | 2 | 353 | |
| 1452 | 9503 | A | 2411 | 1 | 349 | |
| 1453 | 9504 | A | 2412 | 123 | 195 | SWKPSFSAN*HSNRKPNACSHS |
| 1454 | 9505 | A | 2413 | 240 | 743 | |
| 1455 | 9506 | A | 2414 | 284 | 672 | GGWEGLTDTSYRRAPAGIRPVLRQKEQ VIFAVLOPLLVIPIR*TAGVDLQQT/GRP AERPVRKTKKQNTATSKTGITPTQK PHSNVIRFKDERMDMEAGNHHSQQTNT GTENQTTTCSHSYVGVQEQ |

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| 1456 | 9507 | A | 2415 | 579 | 1383 | VGSCAFYLAVSVFLAPRPFLHLQLGAD EARSWDFLRSPPEEFNTNMDIRPNHTIH NNMNDKIKKEELKRSLYALFSQFGHV DIVALKTMRGQAFVIFKELGSSTNA LRQLQGFPFYGKPMRQYAAKTGSDINS KMRGTFADKEKKKEKKARTVDQATAT TTNKKPGQGTIPNSAIPQNSTTQIPQVP DYPSKLNFYSLNKLTRQRETNEMMLSHA V*ISSTWPSSEVPSGYPRHDIAPVEFEN IDGQAAGARDALQGF |
| 1457 | 9508 | A | 2416 | 1186 | 1451 | DLKLVLHEKPKLARRSGSHL*PR/HFGR LWKDCIKPGVDHSGQYRESPLQNIKK KIIWAWWCMPVPTTQAVKVGGSELEK RLRLQ |
| 1458 | 9509 | A | 2417 | 1 | 412 | |
| 1459 | 9510 | A | 2418 | 298 | 532 | MGSWSLPGRTLWKEKVRFLKSKERTNP GSNFFSPFGSOHTREERSQECLSLPLPS YLATRLSLPDSCLPKGRKAH*QRHSEI*L MGFEPGWPGKL*GWIELAFLGLCLHLTL PLPCTPLPPKSTKSGCFSLSIALCFNKQF AVTK |
| 1460 | 9511 | A | 2419 | 5 | 977 | VRGGLAAGRGRGSGAAGPVVVAAMLG AWAVEGTAVALRLRLLLLPARGPGL GVAGVAGAAGAGLPESVIVAVNAGGEA HVDVHGIHFRKCIPL*GRVGRASDYG MLPILRSNPEDQSCYQTERSN*EETGYESP IQREGGLTCWSLKFAEIVFYFAQQQKVF DVRLNGHVVVKDLDFIDRVGHSTAHEI IPMSIRKGGKLSVQGEVSTLYTGN*NM/E VKGYL*PIPKVICALYIMAGTVDDVPKL QPHPG*ERKKGEEEEEEYDEGSIPIKKNR PIKNGGQSGPRHNPTP*ASDNLMLPPL VAAGVFIPTLFLCLRL |
| 1461 | 9512 | B | 242 | 232 | 387 | MEGEPVPVEERRRLQEELNEFVESGCR TLEEVTASLGWDLDSLDPGEEAAE* |
| 1462 | 9513 | A | 2420 | 1 | 453 | RNSEKEVEKRKVALQEAKLKAKGLNPD GTPALSTLGGFSPASKPSSPREVKAEKS PISINAKTVKKEPEDRQQASVSPYNGYN NRRSRSGTYSSRSRSHSESPRRHHN HSSPHLKAHTRDDLQSSNRHGHRKK SRSSRSQSKSR |
| 1463 | 9514 | A | 2421 | 19 | 434 | QRGNYSFEIVAMACINLASKIEEAPRRIR DVINVFHHLRLRGKVRTSYIYQSLGDVE WYIEMKLSSWQQTSPSLILDQNYINTKN QVIKAERRVLKELGFCVHVKHPHKIIVM YLQVLECERNQTLVQTAWVVHDGIT |
| 1464 | 9515 | A | 2422 | 171 | 437 | TSNFYYLSYNNRRSRSGTYSRSRSRSS HSESPPRRHHNHGSPHLKAHTRDDLKSS NRHGHIRKKSRSSRSQSKSRDHSAG*KH RLE |

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| 1465 | 9516 | A | 2423 | 21 | 1855 | FPGRFRFLRWACVRLAKTMASGPHSTA TAAAAASAAAPSAAGSSSGTTTTTTTTT GGILIGDRLYSEVSLTIDHSLIPEERLSPTP SMQDGLDLPSETDLRLGCELIQAAGILL RLPQVAMATGQVLFRHFYFSKSFVKHS FEVAMACINLASKIEEAPRRIRDVINVF HHLRQLRGKRTPSLILDQNYINTKHQVI KAERRVLKELGFCVHVHKHPIIWMVLYQ VLECERNQTLVQTAWNYMNDLSRTNVF VRFPQETIACACIYLAARALQIPLTRPH WLLFGTTEEEIEICIEITLRLYTRKKPN YELALEKEVEKKVALQEAHLKAKGLNP DGTALST/LGVGFSPASKPFIHQENVKA GRRKSPIFHLMWKDSKKKEPGG*D/RQA FPKALYNGVKEKDS/RRRSRNRSA/SRS RSRTRSRSRSHTPRRHYNNRRSRSGVTYS SSPRSRSPSHSESPRRHHNHGSPHLKAK HTRDDLKSSNRHGHKRRKKSRSRSQSKSR DHSDAAKXHR/HERGHHR/DRERSRSF EEVP*KARIIHWPVRS GTWARAQGADL SSSLWSPAIQFLGFGPIYQCDGMGLNPKT IKRKTGLGDFDLETPRPS |
| 1466 | 9517 | A | 2424 | 1 | 1566 | |
| 1467 | 9518 | A | 2425 | 328 | 889 | GLRTPAAYLYCGTVRTAGVAAASRYOG DNIYVKNLDDSIDDERLKQEFSPFGTI*S AKGMMEGGHSK/GFGR/ICFSSPEEASK AGTELNGRTVATKPSYVALAQPKKECQ AHLNSQHMQRMASVRAVPHVMNPNYK PAPPSGYLMTGIPETQNRPPRPAVGHP NPSTLGGQEGKNTGSGDRDHPG |
| 1468 | 9519 | A | 2426 | 1 | 2262 | |
| 1469 | 9520 | A | 2427 | 365 | 2419 | FSIPVDFCSALAPRSPPPGSGPQRHSL SSHQKVAACPAOSRAEMNPSAPSPM ASLYVGDLPDVTIEMLYEKFSPAQPL SIRVCRDMITRRSLGYAYVFOQPADAE RALDTMNFDFVKGKPVIMWSQRDPFLR KSGVGNIFKNLKSIDNKALYDTFSAFG NLSCKVVCDENKSGYGFVHFETQAAA ERAIEKMNQMLNDRKRVGFRKSRKE REAELOARAKETNVYIKNFGEDEMDDE RLKDLFGKFQALSVKVMIDESGKSGKF GFVSPERHEDAQKAVDEMNKELNGKQ IVVGRAQKKYERQTELRKKEFGMKQDRI TRYQGVNLVYKMLDDGIDDERLRKEFS FGTTSAKVMMEGGRSKGFGFCSSPE EATKAVTEMNGRIVATKPLVVALAQRK EERQAHLTNQYMQRMASVRAVNPNTN PYQFAPPSGYFMAAIPQD*DRAAVYPPS QIAQLRPSRWTAAQARTHPFQNMPGA IRPAAPRPPFTMRPASSQVPRVMSTQR VANTSTQTMGPRPAAAAAATPAVRTV PQYKYAAGVRNPQQHLNAQPVQTMQ PAVHVQGEPLTASMLASAPFQEQKQM LGERLFLIQAHPHTLAGKITGMLLEIDN SELLHMLPESLRKSVDEAVLQAQ AKEAAQKAVNSATGVTPY |
| 1470 | 9521 | A | 2428 | 2 | 237 | |
| 1471 | 9522 | A | 2429 | 68 | 866 | GSTGAVTAATATAAAGASAPLGLPV YLPAPRSTAPAPSPAASALLFLVITPSP ERLPSHQPPSATMATAPYNSYIFKYIII GDMGVGKSCILLHQFTEKKFMG*FVPH TIGCWNLGTNRSLVGGKIKL/QIWGLR QGQERLRAVYTRYAYRGAAGALMVY DITRRSTYNHLSWLTRCQGISPNPKYW **SIGN*SQWRPQRDVITYEEAKQFAEE NGLLFLEASAKTGRRIVEDAFPLRACPR KIYQNIQDGKLG |

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| 1472 | 9523 | A | 243 | 1124 | 1394 | ACDDWNRMDKSHLHPPPPPPRDPDYV GPSGTRSPPTSGSRSPRNRSAAPPAPPA PPQVQARPP*HSPFDKRRPNCRRTRGSP PWFRS |
| 1473 | 9524 | A | 2430 | 229 | 593 | SLICFVGVGDCAEFWVTRLAPRAEKRR LAPAVPHHQDERGGTSTPHFNHLSHG WVTFPALLQYDILPLNSFLHEIQEPLSG SGLQPFSCNTYLSFSSTCHLAPVNLNWA LFGASIM |
| 1474 | 9525 | A | 2431 | 594 | 829 | PCALVPLRPYATK*GMLPWILLGHLQS RAFAVALDHILF*VL/CHV*IPSLTKIFEN GYFVISVLLMRNLSSALL |
| 1475 | 9526 | A | 2432 | 1479 | 1734 | LKVNISLGMVGHACNPSTLGSQE*ATVP LILYFLNKLAFTHSCHGITLNSFLHKIQEPS LGSRLGPLSCNYHATALQPPQQSKALS |
| 1476 | 9527 | A | 2433 | 30 | 508 | |
| 1477 | 9528 | A | 2434 | 338 | 853 | EGRGFRAGLPLPLCIAALFQFKMNYMPG TATLIEDNDKXHLVLLRDGRTHIGFLRS IDQFANLVLHQTVRIHVQKQ/YTGDIPIR GIFVVRIGENVLLGEIDLEKESDTP/LQ QVSH*RKFLQEGKQWVQTKLAEAEKL KVQALKDRGLSIPRADTFDKDLFFCPEA VGS |
| 1478 | 9529 | A | 2435 | 357 | 893 | TVFQIWANHGGQRPARQLCPVHLLGGQS HQEPRHVTSNPSERASASLRLRLTPLKPTG IGPQSQILED RDRFRAFT*WGDYFWGKGA PACLIQDGVKGQWAGPHSGVGGVGGWP APRACPPVSPQGPQSSACGQYYLSRP KAYPQGWGRGGDPPGQNVRSVCDLRC CMWTLNCTCSF |
| 1479 | 9530 | A | 2436 | 233 | 566 | RLFLVRKRMISFSAPPLMLPFSFYFVC PAARTARKRKPSPPEGEVGPCKINGEA QPWLSTSTGLKIPMTPTSSFSVSPPPPTA* PHSNRTTPPEAAQNGQSPMAALL |
| 1480 | 9531 | A | 2437 | 219 | 702 | ARKVRAARAAGLESRTGSTGRPCATRC WRCTSTATRGPSRASFKKEPALTA VART ARKRKPSPPEGEVRAPLRSTKEAQPGC PHSTGLKIPMTPTSSFSVSPPTASPHSN PGPHRLSQRPMGQFPIGSPDLSSRQFRG QSCSKDANQVHSTTRRNS |
| 1481 | 9532 | A | 2438 | 173 | 1136 | ALFGAGKSRGFWRAGLGQQAQDRARH AAGRCTSTATSGPFESKFKEPALTAGR LFGVFEGQRGQGLKAVCKNSKKGSP LPEPRKVKSGPLKIQRRGPSRRL/SPHPOR GSRSP*LLHPLCLRHPLPHLIFTGPHRL KRPRMASPPWQP*S**QTMQGASHASKD ANPGSLPTTRKE*PTVGPSVLL*TKERL GPKRGGGPREQATQEDWEP/HIASLPDF LFGQPVAPLCCTLCHERLEDTHFYVQCP VPSHKFCFPCSSSQIKQQGS/SGEVY/CP SGDKCPCSCGLPMSPWAFMQGEIATILA GDVKVKKERDS |
| 1482 | 9533 | A | 2439 | 1 | 206 | PTFRPTSIEKQGYLLPPVFSVILEVLAR AISQETIEKSVQMKEEVKLSL/FVCVYI YA*ENPVESTK |
| 1483 | 9534 | A | 244 | 171 | 512 | CTVGVRCTVFFTEHKLPAVESHLIVSRSE SVINKI*ANQIWEH/IKKIIHHEEVGILGM QGWLNIIRKAPTEIYHINR/SKDKNHMILT /D*EKAFDKI*HYFILKTLDKLGI*GNF |

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| 1484 | 9535 | A | 2440 | 611 | 1203 | ERLLRVCLALGSAGTADDVKLHPVSCA DTARSTPGTSAPSTSGTSAPFTPGTSAPST PGTSAPSTPGTSAPSTPGTSAPSKPGTSAP STPGTSAPSKPGTSASSTPGTSAPSKPGTS APSTPGTSAPSKPGTSAPSTPGTSAPSKPG TSAPSTPGTSAPSTPGQHPHRRGPQHPP SRGPQHPPHRRGPQHPPSRGPQHPPHLLGP QHPPSRGPQHPPHRRGPQHPPSRGPQHPP/ PPGTSAPSKPGTSAPSTPGTSAPSKPGTSA PSTPGTSAPSKPGTSASSTPGTSAPSKPGT SAPSTPGTSAPSKPGTSAPSTPGTSAPSKP GTSAPSTPGTSAPSKPGTSAPSKPGTSAPS KPGTSAPSKPGTSAPADPGVL |
| 1485 | 9536 | A | 2441 | 447 | 920 | GWHWFLASOKSLLKPPLSRNPCVLVSC MAQSWARTQFCLCPMCPPT/CAQSGTGT ESCFNPN*VLGAGAPQDQORCHKAGPF SSPGFR.LPSSRHGGPVLPGTLGPPGPPG RPPHKPSNEQDAGQQQLPFPACPQKQ LPOLPCLKFYSLPELPH |
| 1486 | 9537 | A | 2442 | I | 374 | LRKDDTQIREAFHIFVQSWRPAFLPSLPSL PLARALAEITLNPFFGSLITPSGILLNSQ MLDFSWPNTANHSAPS/TVVRPAEGLC GTYLALGANGAARGLSGLTQVLLNVLN *NRNLSDSLARGR |
| 1487 | 9538 | A | 2443 | 1 | 315 | |
| 1488 | 9539 | A | 2444 | 3 | 2027 | NSRVDDFVARARMAAENASQESALGA YSPVDYMSITSPRLPEDEPAPAAPLRGR KDEDAFLGDPTDPPSFLKSARLQRLPS SSSEMGSDGSPLETRKDPFSAAAAE SCRQDGLTVIVTACLTATGVTVALVMQ IYFGDPQIFQOGAVVTDAAARCTSLGIEVL SKQSSVDAVAAAALCLGIVAPHSSGLG GGGVMLVHDIRKNESHLDIFRESAPGAL REETLQRSWETKPGLLVGVPGMVKGLH EAHQLYGRLPWSQVLAFAAAVAQDGFN VTHDLARALAEQLPNNMSERFETFLPF GRPPLPGSLHRPDLAEVLDVLGTSQGA AFYAGGNLTLEMVAEAQAHAGGVITEED FSNYSALVEKPVCGVYRGHLVLSPPPH TGPALISALNILEGFNLTSLSRQALHW VAETLKIALALASRLGDPVYDSTITESMD DMLSKVEAAYLRGHINDSQAAPAPLRP VYELDGAPAAAQVLFMGPDDEFVPMVS SLNQPFSGLITPSGILLNSQMLDFSVPN RTANLSAPSLENSVQPKRPLSFLPTVV RPAEGLCGTYLALGANGAARGLSGLTQ VRFTPWLAFFSREPSGLDCLCS*QSNL LQVDSECAETSWGGHRRD*RKDSSQG CPWVHGSRRTNNFIIAVKDRSPDAAGA TTL |
| 1489 | 9540 | A | 2445 | 83 | 310 | IFQCTKFTWDSOITPRLFHAPPTWCRPL PVSQ*RRVRGWIITRQSGSGGRGAPLS SQAPPKGPVPFQWHLRAEG |
| 1490 | 9541 | A | 2446 | 1 | 1833 | |
| 1491 | 9542 | A | 2447 | 3355 | 3951 | |
| 1492 | 9543 | A | 2448 | 699 | 975 | |
| 1493 | 9544 | A | 2449 | 3 | 132 | GRFSSESSPRA/GPPPAHRRGHVQRCCVS PTGLLIWKELERPCF |
| 1494 | 9545 | A | 245 | 1 | 293 | FLRWSLALSPSLECSGAISHRNLRLPGS TNLPAISTSRVASTVGMATAPGLNFCIFS REG*VKHVGPGLCLPVTSSDPLPI.VSPK LRDYRPEPLCLA |

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| 1495 | 9546 | A | 2450 | 2 | 1734 | TDLKRCITYETCATYGLNVERVQDVGII IDSAPVCSAQKVVALRKKQQLAIGPASH CPNSPKHWAIVASASIPAVHITQATNGG GKAFSDYSSVPSPTSPISQRELRUETIAAS STPTPIRKQSKRRSNIFTSRKGADLDREK KAAECKVDSIGSGRAIPKQIGILLKRSKG SLNKEWKKKYVTLCDNGLLTYHPSLHD YMQNHGKEIDLRTTVKVPGRKLPRAT FATAPTGTSFRANGLSVERSNTQLGGGNR GRGVVHCQWVSLTGADVGTGFGNGR RERELLGFQSVQAQILASLQGCQCQGO DFDLGNQNAALAVQAVRTVRGNSFCID CDAPNPDWASNLGALMCIECSGIHRHL GAHLSRVRSLDLDWPELLAVMTAMG NALANSVWEGALGGYSKPGPDACREEK ERWIRAKYEQKFLAPLPSSDVPLRQQL LRAVEDDLRLVMLAHGSKKEEVNET YGDGDGRTALHLSAMANVVFOTLL/W GESRASSLP*PRSS*PCSLKATSSFLPNQ SLSSHVLPVNMCFLLQYGVVRSRDRAR GLTPLYARAGGSQECA |
| 1496 | 9547 | A | 2451 | 329 | 3294 | ESEFII.WGEQLAGGPPQFALSNSAAIRA EIQRFSVHPNIIAYIDLIERIEDLAIQNQI REHVISIEDSPVNSQEWLTSRSPVELKIV GIVGNLSSVGKSAIVHRYLTGGPIVQGG SPLKGGGLRSEIAADGHSYLLLRIDEGGP IGELQYAAWVDAMVVFVWSPCEDGITFS KTVYNYFLRLCSFRNASEVPMVLVGTQ DAISAAWNPVIDDSRARIKLSTDLKRCTY YETCATYGLQCGSVSFQDVI |
| 1497 | 9548 | A | 2452 | 493 | 955 | TLCTYILISEVISLPGTAFIQRKGLGLRPS QNNAYSLSQTSPLHIFLRVQKGFDLNLA LVLFSSGGTFSRIAQLCESGMTSAHCN LRLFGSSYSPASAS*VAGTTGACHHAQI FLVFLVEKGPHRVSRDGLHLNLVIRPP QPPKALGLQA |
| 1498 | 9549 | A | 2453 | 158 | 720 | PPPCRAKHQTKTKKRPQRATSNVFM FDIQSQIQEFKEAFNMIDPDQDGFUDRE DLHDMLASLGKNPT*WSILDAMMMRA PGPPSNFTPWFPHHGFGEERLNGHQIPE DVHRKMPFACFE*KKPLGTIRIEDYURE LLTTHGGIGITDEEVDELRYEAPY*PKRG NFNYSEFTRILKHGAKDKDD |
| 1499 | 9550 | A | 2454 | 2332 | 3329 | VAGATGTHHHAWLILSFLRWSLTLSPRL ECSGTFSAHCNFRLGSSNSPASAS*VAR ITGAHHHTLRFVFLVETRHHGGQVGL KLLTSGDPPASASQSTGITGVSHHAWPY FKLFCRDGVLLCCPG*SQTLGLKQSSCQ SFPK*LDYRCEPPRPTNL*RCARDRVPL TTSPPVRSGGTRMKEKEVPEQRLAGSRM GOELTQOPSTETSWSLGRRRTKSPLFHFF MFLRRSLNSVTQAGVQ*HNLGSLQPPH GFKRLSCLSLSSWDHRCPTPCLDNFHF GRDG/GFTMLARQVNS*PO/GPPTLASQ SSGNTGLSHCNQPVAPIFAPR |
| 1500 | 9551 | A | 2455 | 566 | 1037 | GSILSPSLPGFCPENSNCKCNFILLTAES LKLPODLSFDPQKPTQVRHLESPFPEG PPSRAPQKNSHEIRINCLMKICIFL*LR MKAQTPTLLFSPGLGMSPAARPSFPGG LGEVGAGTISVPSTLTPSTSETLLPQRY GMKLADADVGKKKK |
| 1501 | 9552 | A | 2456 | 349 | 679 | ELGHWGNRVCLSEALGLAELHPCPNE VGPORQG*GLAVLILAILLQGLTAOSIK GNHLVKVYVDWQEDGVSLLTCDAEAQN/ JSTWFKDGKMIGFLTEDKKKWSGEVYM PRDPRGMYQC*RDHRNKSKITTSQVLEF GMCSTGCI*DLNAATISGFPLWLTQVSL FVLAFGVYFIAAGQGWSSASFRASDKQT LLPNDPAPTQPLKDPKMTQYSHLQGN |

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| | | | | | | QLRRN |
| 1502 | 9553 | A | 2457 | 356 | 505 | WTGGKKKAGWMPKKE/SVKLAQ*CMP VIPATQEAETGKLLLEPRSSRSWET |
| 1503 | 9554 | A | 2458 | 35 | 359 | |
| 1504 | 9555 | B | 2459 | 102 | 431 | MIYYRDLISHDEMFSDIYKIREIADGLCLE VEGKMVSRTEGNIDDSLIGNASAEQPE GEGTESTVITGV/DIVMNHHLQETSFTKE AYKKYIKDYMKSIKGLLEEQRPDR* |
| 1505 | 9556 | A | 246 | 466 | 743 | LNHAVQEMIVKIELTQHMVNFHGIKLEI NKGGKFGKLIHLWKLNTTVLSQ*VKA EQKGNKEIVLRWNKKEGMMYQNT/W/ DVAKPVLRAAW |
| 1506 | 9557 | A | 2460 | 1 | 581 | |
| 1507 | 9558 | A | 2461 | 88 | 779 | STWAVRGSRGWGVGWGGGGSHDEM SDIYKIRGDRGRGLCLEGGRRWVWV E/GNIDDSLIGGKCPPLKGPEGRVPERH QLITGV/DIVMNHHLPGNKFSQKEASKK VHQRTIMKSNKGL*RTDRPEKSKTFL* QGAEEQIAHPLPNFQKLTSTFNGENMN PRWAVVLLLDYREDGWCP*YDFLLRD GLEMEKMLTNVGNVFGSITLSSITGLLPC HPTQPPGT |
| 1508 | 9559 | A | 2462 | 12 | 159 | WSHLRLMLQL*WS/HPKNAAAYSSCRV **ERRGLRITYGLDMCSQSFCQYAKDIG IKLD |
| 1509 | 9560 | A | 2463 | 46 | 371 | FVILGKRRCRGALGCLKSQVEEATGGTRE HADWESLVPLQACTVAWESRDAGSSR LSAESCNFYDLQNRCLFSYRVCNSRHG LURKYGLNMCRCQCFRQYAKYIGFI |
| 1510 | 9561 | A | 2464 | 1 | 591 | GLLQAEQWVRSSGEAAFREITMEIWLLA WAISPVALSESTDPTWQSRCDRHFLF KFLVIGSAGTGKSCLLHQFIENKFQDSN HTIGVEFGSRVVNVGGKTVKLQIWDTA GQERFRSVTRSYRGAAGALLVYDITSR ETYNLSAAWLTDAITLSPNIVILCGN KKDLPEREVTFLEASRFAQENELMFLE T |
| 1511 | 9562 | A | 2465 | 3 | 495 | GRDRVMAETDYDLFKFLVIGSAGTGKSC LLHQFIENKFQDSNHTIGVEFGSR/IVAN LGGEPEVKLQIWDTAGQQTGFACTYTT SLAAWLTDAITLSPNIVILCGNKKDL DPEREVTFLEASRFAQENELMFLETSALT GENVEEAFKLCARTILNKIDSG |
| 1512 | 9563 | A | 2466 | 1 | 2022 | |
| 1513 | 9564 | A | 2467 | 3 | 715 | REQAPRRHIAALSGRDRVMAETDYDLF KFLVIGSAGTGKSCLLHQFIENKFQDSN HTIGVEFGSRVVNVGGKTVKLQIWDTA GQERFRSVTRSYRGAAGALLVYDITSR ETYNLSAAWLTDAITPVQPKGTGAFLC GUNKK*PGPLEREVTFLE/AFSRFAQENEL LMFLETSALTGENVKKAFKLCARTILNK IDSGELDRERMGSIGYGIASLRKLRQP RSAQAVAPQPCGC |

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| 1514 | 9565 | A | 2468 | 3 | 953 | VKMALVASVRVPARVLLRAGARLPGA FGRTERAAGGGDGA/RPFGQRVLEPD AGAGVAVMKFKNPPVNSLSLEFLTELVI SLEKLENDKSRFDVILTSDRPGVFSAGL DLTEMCGRSPAHYAWVLERPVQELWL RLYQSNLVLVSAINGACPAGGCLVALT CDYRILADNPRYCKGIQIRPKVGIICPFW G*KETLGNLILPGGGESAILQVGLFFP PAGRPCKVIVDQVWSPEKQVQSIGLS AIAQWMAIPKPMAHKULTKAMRKGQGP PAWSRKGADYQNFVVSFISKDSIQKSLQ MYLERLKEEKG |
| 1515 | 9566 | C | 2469 | 1 | 774 | MKEVVYWSPPKVADWLLNEMPEYCE PLEHFTGQDLINLTQEDFKKPLCRVSSD NGQRLLDMIETLKMEHHLAHLKNGHAN GHLNIGVDIPTDGSFSIKIPNGMPNGY RKEMIKIPPELERSQYPMWEGKTLFAL LYALSCFVLTVMISVHERVPPKEVQP PLPDITFDHFNVRVQWAFSICEINGMILVG LWLIQWLLKYKSISRRFFCIIGTLYLYR GITMYETTLTAPGMLNCSCFKLCGDCEA QLR* |
| 1516 | 9567 | A | 247 | 243 | 935 | IPVGELYPLLEDGIAFIEWNPTHEALWE PQEQEQEQGPKSKHGEAPVGASWPFRR GFGEARPPPPVRPTLIHAWKSS*PICLFL RHCHQALPGGTLDKWSSPRG/GCSPRT PGVTQARRLSPHRVAG*QSSSGACPW MSRSSAPFPFLTPSQSPRAAL*VRKTKSP GTGEHLWTGLGAGGV SARPVVKHSAG PGGIHGGRAPGAEQRSGLWKAGCWGVS RASAPGP |
| 1517 | 9568 | A | 2470 | 263 | 621 | EVRLLSRPWPHEHEHGPWPLTIHKWDFP DYRQWKIEGTFPRKTIQKCLKCKGLR D*PWGRNEA\WRVMGGFAKSVSFS*CL FKGFKWGDLLAFVVAVREYLPGESP* IKDKKHH |
| 1518 | 9569 | A | 2471 | 1 | 225 | |
| 1519 | 9570 | A | 2472 | 99 | 493 | TASPAPQAFRRSSSLSKIRESIRRGSEKL VSLRLGEAA\RRTRS\SVSDQVQKEP*HQ QNRQPTPPPPFCSTRTHGSHLP\CDTHRS NPVLERSLVEGGHSHHSFPCCPLCRM KRDMSLNTLNVDAAPRAG |
| 1520 | 9571 | A | 2473 | 70 | 299 | AVGSVHAGVQOVVSGGVGPPGSGAGPP GRKPLR*RGPSDDPARRNAPAIERLSRRR GRCSARGLRGRDQEEGQPGRT |
| 1521 | 9572 | C | 2474 | 129 | 602 | MFERIVXADHEVIDQGDGDGNFYVIERG TYDILVTKDNQTRS\VGQYDNNGSGELA LMYNTPRAA\TIVATSEGLWGLDRVTFR RHVKNNAKKRKMFEFSIESVPLLKALKD GQRFNPHLHFAFEGPFIRPLVKITPTQFLY LWFKTACLSNNLSA* |
| 1522 | 9573 | A | 2475 | 38 | 1523 | RRVARPGNAEPKERRDVSRRGARRDL AGAERKAGVSESGDSGRRRPNPSPISAA AGMSHIQIPPLTELLQGYTVEVLRQOPP DLVEFAVEYFTRLREARAPASVLPAAATP RQSLGHIPPEPGPD\RVADAKGDESEED EDLEVVPFSRNNRVSVCAETYNPDEEE EDTDP\RVHHPKTDQRCRLQEAACKDILLF KNLDQEQLSQVLDAMFERIVKADEHVI* PKGDDGRQPFYCHRTGGTYDILVTLN QTRSVGGYDNNGSGFWRLALMYNTPRVA ATIVATSEGLWGLDRVTFRRIVKNNA KKRKMFEFSIESVPLLKSLVSESRMKJVD VIGEKIRIDGER*ITQGEKADSFYIESGE VSILRSRTKSNKDGNGQVEIARCHKGO YFGELALVTNKPRASAYAVGDVKCLV MDVQAFERLLGPCMDIMKRNISHYEEQL VKMFGSSVDLGNLRAVGVPHPHTSLLSVT PKPSGQFQNTYRKQT |

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| 1523 | 9574 | A | 2476 | 1 | 912 | |
| 1524 | 9575 | A | 2477 | 3 | 806 | EEFAAVSERIHEQVRDRQLENEYVCRVE GEPTTEEVTCKEPILVVSYKVGVCVRVDP RGKPCETVVFQRLSYNGQSSVRCRPLTG RTHQIRVHLQFLGHPILNDPIYNSVAWG PSRGRGGYIPKTNEELLFVPG*AEHQAK QSLDVLDLCEGDLSPGT/LTDSAPSSSEL GKDDLEELATAAQKMGKG*AEAAPQE LDTIALASEKAVETDVMMNQETDPTLCK MPAGATGSLAPRPCDVPCTPCNAIKGQAL STPHMPAWAQDDWQKD |
| 1525 | 9576 | A | 2478 | 184 | 793 | DFLLVLTLGLYIYRKSIIHVLE*IEFINV TSYKVNIOKDIALIRTSQKH*KTN*KYKA KYLEIN*TNQDFYENYKTLRKRKVDN LGKWTIPYSSTGKLDIVKMSILRLFYKT NAITGIVPK/HSFVKINPEIKLI/YGNMGN REGKTILKNKKVGRSLDPDFQKYKAT* KIVWY*CKKRQMNQEAITSKRKPWS L |
| 1526 | 9577 | A | 2479 | 69 | 403 | SALRRGAGAKAGRPLAPATALGGQTQP EKGPA*NGWTGLGAGPPAWRARPRPS PPEFSQFSLSYNMS*AKVGG*EHGSTAPG EGG/P*RKGGGPPPNPQRQGSPTSP |
| 1527 | 9578 | A | 248 | 56 | 247 | QEQNPQISILTLNRNG/LNATLKRYRLN QK/SPCKKQDTMCCQLQETYLTCCKDTHR PKVKG*KN |
| 1528 | 9579 | A | 2480 | 502 | 834 | RRLPTGILAGRVSAAVKPTHRTQNSLL QRITPRPWRGGSHL*SQHFGKPRQADHL SPGV/PRVSPG*RGETPSLQRIQLAQVLIC CAPVVPATREVEVGSPPEGRSLQ |
| 1529 | 9580 | A | 2482 | 1 | 220 | VNMRDRFGQIMENLRRRQCELAGVETC KSLESRIESLEFLDEM*/LLEQLM/RHYCL CWATKGGNELGLKEITY |
| 1530 | 9581 | A | 2483 | 98 | 394 | |
| 1531 | 9582 | A | 2484 | 1 | 381 | |
| 1532 | 9583 | A | 2485 | 1 | 645 | |
| 1533 | 9584 | A | 2486 | 10 | 1228 | AAPAEPRALPSSVAFSLWLAPSPAARR PRFHVPGGAQLPGTVHARWAPRQRVSSI YTSCCSTSSCADDEGVRGTCEDASLCKR FAVSGYWHDPYTQDLVRLSKQRKAP EINRGYFARVHGCVSQLIKAFLRKTEC HCSNCSNLGGQGMGSPFPWRLKDEDLS SQVNIFEVDPMIVTRKLHSIKWLAFLS SPILELHSEDTLQMASDCICDGHILDSKR YAVIGADLRDLSELEELKCCNMNTQLA PTP*IAECVLVYMTPEQSANLLKWAAN SFERAMFIYYQVNMGLDFGQIMENLR GRPV/CDLAGVETCKSLESQKERLLSNG WENKHRPVRT*LEFVPPGLPSKLK*SRIE SLENLDENWELLEQLMRHYCLCWATQ RRK*SLGLKEITY |
| 1534 | 9585 | A | 2487 | 3 | 247 | |
| 1535 | 9586 | A | 2488 | 1 | 922 | MQLKPMENPEVSARCTATRRARGRGR GSRVADRFGFAFFAFQMLNKLVS/R LGVAQGWRFVDVLGLEEELSGVPAPA CALLLLFPLTAQHENFRKKQIEELKQGE VSPKVYFMKQTIQNSLGPLGNSTQGPNI KDQLGFEDGSVLKQFLSETKKNVPLKD RAKCFEKNIAIQAAP*MPVGTGAQCR VDDRNVNFHFYSYG*PTVDGPPSMNLDGP NAFSPWTHGQLQEDTLLKQDAS/KVCR NSPEREQRRSPASSARGFSCCKSLNALW GGICWIFSPFPKHGKYITPCQSKMLQY L |
| 1536 | 9587 | A | 2489 | 18 | 255 | NWISFLPWYHSHFEVYERYDSVL*IPFSL LQ*PIENVYPKI*KKKSTSSNKIALVLSGT YKNSLEPRSGASSVLWFTPNL |

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| 1537 | 9588 | A | 249 | 1 | 372 | RALAVSMLGAWPGPWALDWGPYSMTA RHGTFSL*APYPDPGAPGPPAPRQGGK APSGCGGRSICSGRRLPSVVWPLMPAWQR PS*GGGLHSAFNARKAQAYPGCLPPYPL LPLGLSGWSAGFLC |
| 1538 | 9589 | A | 2490 | 2 | 568 | ERGRKMAVESRVTQEEIKKEPEKPIDRE KTCLPLVRVFTTNNGRUHHMDEFBSRGW VPSTELQIFPL/WMDATLKLSTLTKRV YPEARKKGTHFNFAIVFTDVKRPGYR*F SFLQS*GGLASTVMSGRKGTDDSHPLQ SQKFPQIGDYLAIDANYPLPNRGTHPPSLG RMRPILNFYLLFVFIFPFSVM |
| 1539 | 9590 | A | 2491 | 3 | 506 | FFFFLKTSLSTITHTCLQIQREGPGAEG AAVAGGAPRGAEGAATSTETGGSGAD/ AAPSP/RGLPSK*QEGPGPFWGDPNARQ WPGGRGRREAWRGLRAGSGESHQVGP WPASRSTGGSGQVGGAGERLGEDSGL GQVKATRWGLSPPPAALAEAVANTGPSP PC |
| 1540 | 9591 | A | 2492 | 3 | 639 | APEFFGRJILLTLQCLSLASIQTRMVHLT PEEKSAVTALWGVNVNDEWGGKALGR LLVVLVPWDPKRSFEVLWGNLSQLPECC *WKGPLKVGSMMAKEKVLGCPLSDGLA HLGQPSKGTFAHTEVSLHCDKLHRGSL KNFRLLGNVVLGCLCAHHFVGRKSTPP VQA*A*SRKLVGLVLAACKPWPHKYHLKL AFLAVQFLKGFVLSLKTNY |
| 1541 | 9592 | C | 2493 | 217 | 396 | MSEETAKEVMRAYLQQLRQETGLRLCE KVFDPNQDKPSKWWTFCVKRQFMNKS SXPGQ* |
| 1542 | 9593 | A | 2494 | 79 | 778 | NPGAAKMPAYHSSLMDPDTKLIGNM/A HLLPIRSQFKGAPKRDTRIPDIVDEAIFL PSGPNVFFKNYEIKNEADRTLJYITLYIS VECLAUKLQK/CQFFKAQGGGKEMFYAGE STNFSHFLGEPGFPL*PPFYAQTWPTTQ EDEVMRALFTTQLR/QETGLRLCGESFS DPQNG*TPAKWWTFCVKRQFMNKS SGPGTVEGSPGQPTVFPEALQGHFSSKM LHNLFAFIS |
| 1543 | 9594 | A | 2495 | 1 | 471 | |
| 1544 | 9595 | A | 2496 | 1 | 1524 | |
| 1545 | 9596 | A | 2497 | 2 | 719 | RPQRAGPVRRAGVMALLDLALEGMAVF GFVLFLVWLMHFMIAHYTRLHLNKKAT DKQYSKLPVSVLLKPLKGVDPNLINNL ETTFELDYPKLPFSVAFMKRIEKTQM** P*CTY**YEVLLCVQDHDPAIDVCKKL LGKYPNVDAIRLFIGGKKVGNPKNNML PGYEVAKYDLIWCDSGIRGTMEMPMML EQSYDPNVRDPYRNNGDADGQHLVLH DFYQGGSGPKCSLINA |
| 1546 | 9597 | A | 2498 | 200 | 370 | |
| 1547 | 9598 | A | 2499 | 295 | 1546 | CVLLDLALEGNVPVGFVFLV/LWLM HFMIAHYTRLHLNKRATDRQPYSKLPV SLLKPLKGVDPNLINNLVETTFELDY/K KFNILHTMLFD*YEVLLCVQDHDPAIDV CKLLGKYPNVDAIRLFIGGKKVGNP KINNMLPGYEVAKYDPIWICDSGIRUFP DTLDMVNQMTKVGVLVHGLPYVADR QGFAATLEQVYFGTSHPRYYISANVTGF KCVTGMSCLMRKDVLDQAGDFIAFAIQ YIAKDYFMAKAIADRGWRFA MSTQVA MQNSGSYSISQFKSR/MIRWTKLRINMLP ATICPEISRMPLLPSLINWDGQAHHVFR WDIMVFFYG/CHCLAAWFIFDYIPTGVS QGG/TLCSKGLMLQSPWFIRESMYIYFL SALWDPTISWRTGRYRLRCGGTAEILD V |

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| 1548 | 9599 | B | 25 | 922 | 2057 | XTOTDSPWFMISEKQRNFNAESTIGSHIH GPRIVAGLHAPFLMEDEEDALQETVRAS IRKEQRNSRIHDGGDGIRKAHAaipresRS MKSSPKEVKKKRWNRFKMSLAQKKD RVAQKKASFLRAQERAAES* |
| 1549 | 9600 | A | 250 | 13 | 475 | NGSSLRSPRLR*SKTIPQSS*VAGITGAHH HARLIFFFFFETESCRVSVQAGVQWRDL GSLQALLPGFTPFSCSLTQSSWDYRHPPP RPAFLYF**RRGFTVLARMVLIS*FRDP PASASQSAIGHVSHRARPRGRLLAPSYI CRNRGLEG |
| 1550 | 9601 | A | 2500 | 3 | 331 | GAILAHCNLRLP/GFKQFSCSLPRHS*TS Q*PLTSRLPMVRHG*VKKSEGILCSLPPC TT*VPTSSAPMPWPSQWERSRIMTIVIS SSQLMALGPSCQRDGSPTSSP |
| 1551 | 9602 | A | 2501 | 15 | 310 | DRVSL/LSPRLECSGAILAHCNLRLP/GFK QFSCSLSPSSWDYRRRAPHLANFLYF** RRFRH/GCPGWSLSSGN/PATLAF*KC* NYGHEPPHARKIHI |
| 1552 | 9603 | A | 2502 | 3 | 467 | PAPQSLLSARHVSALPTPAS/R/CSGLPP MTPKTMRA/VGSPCLCPVARRSSSEPRK NSAM/RALLVDIKLEPLAVTPDAA/SQPLI DLPLIDFCDTPEAHVAVGSESRPLIDLMT NTPDMNKNVAKPSPPVQQLIDLSSPLIQL SPEADKENVDSPLLK |
| 1553 | 9604 | A | 2503 | 2 | 273 | FASIPANSRPLSNISKSGRMGHAMLRPA LPAGPVGASSWQAKRSESSQNLNKTISR RRHSCLSNKTVMPTPTNQKIPKFSIGD SPKA |
| 1554 | 9605 | A | 2504 | 1 | 472 | VGRVTVHSTPVRSSGPGQSLLSARRV SALPTPASRRCSGLPMTKTMRAVGS PLCVPARRRSSSEPRKNSAMRTEPTRESN RKTDSTLVDVSPDRGSPFSPVQALNFSF EESDSTFSKSTPLIDFCDTPEAHVAVGSE SKPLIDLMTNTPDMN |
| 1555 | 9606 | A | 2505 | 759 | 1664 | TAGCGLGACSGPQAGHPATAGPQTLLPS AGGRAWSSCFFPALHRWPAGWEGCG YRRWS/RAASYSPWKNKVLLIKPFSIRYK AQSSNSYDKPTYQSPSRRLSAA*IPTHP* SLSSRGCERRCAPTMRQPGAADTEPMC YHWPHHSLFLPSSCLWGAGVEDKEL VPLWRVFLPGRRSWFFSSQKSRCLSHK LGGCQVSRRGKFEQQNLSSVPDSPGKNK HHGKISGPTCLSGGPGESVPVHRLSESS HWQMSLLQTRAAAPALSAAGFLKSPPLS SQPGPALCPASRSFQCSAQGO |
| 1556 | 9607 | A | 2506 | 1 | 377 | ASRRCSGLPMTKRCPCGRGSPLCPVPR RRSSEPRKNSAMRTEPTRESNRKTD SRL VDVSPDRGSPSPRVQALNFSPEESDSTF SKSTATEVAREEAKPGGDAAPSEVGGLL EPRSSGPAWEMM |

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| 1557 | 9608 | A | 2507 | 3 | 2112 | ILLLADEKFDLSSSSANEDDEVFFG PFGHKERCIAASLELNNPVPEQPPLPTSES PFAWSPLAGEKFVEVYKEAHLALHIES SSRNQAAQAAPKPEDPRSQGVVERFIQESK LKINLFEKEEMKKSPTSLKRETYVYLSDS PLLGPP/VGESCTAHAASQAATQRKPGT KLLLPRAAASVRGRSIPGAAEKRTARMPK GRRKRK*QVLF*G*GCCGG*GEG*GCGE AGSSRIAPKKEIPASPSRTKIPAEKESH DVLDPKPAGVAVNPAAAGSHLGQGGKRA IPVPNKVNNEIFADSVFHFAP/LGLKKTL LKAPGSTSNLARKSSSGPVWSGASSACT SPAVGKGLCCTPVCPARPARPLHSCCK MTPSRPWLMWQCREGLECP*GSGGTWV VRHSCDRRAGRSGSQSPRPHFGSSEVLG* TWRPGERITGSDPSSTPKLSRAQRQSC TSVGSRRH*CCVCRVTVHSTPVRRSSGP APQSLLSAWRVSALEPTASRRCSGLPPM TPKTMPRAVGSPLCVPAARRRSEPRKNS AMRTEPTRESNRKTDRLVDVSPDRGSP PSRVQALNFSFEESDSTFSKSTATEVAR EEAKPGGDAAPSEALLVDIKLEPLAVTP DAASQPLIDLIDFCDTPEAHVAVGSES RPLIDLMTNTPDMNKNVAKPSPVVQGLI DLSSPLIQLSPEADKENVDSPLLK |
| 1558 | 9609 | A | 2508 | 68 | 2331 | LLTALSMEEGGRDEPSASRAGDVNMD DPKKEDILILADENISTFDLSSSSANED DEVFF*PFGHKERCIAASLELNNPVPEQ PLPTSESPFAWSPLAGEKFVEVYKEAHL LALHIESSRNQAAQAAPKPEDPRSQGVE RFIQESKFKINLFEKEEMKKSPTSLKR ETVYLSDSPLLGPPVPEPLASSPALPS SGAQARLTRAPGPPHSAHALPRESCTAH AASQAATQRKPGTKLLLPRAAASVRGRGI PGAAEKPKKEIPASPSRTKIPAEKESH VLPDPKPAGVAVNPAAAGSHLGQGGKRAIP VPNKLGLKKTLKAPGSYNLQKSSS GAIVWSGASSACTPQPVAKAKSSEFASIP AN*LPGLCPNISKSIGRMGPAMLRLPALP AGPVGASSWQAKRVDVSELAEEQLTAP PISASPTQPOTPEGGGQWLNSCAWS SQLNKTSSIRRRDSCLSNKTIVMPTTN QFKIPKFSIGDSPDSSTPKLSRAQRQSC TSVGRVTVHSTPVRRSSGPAPQSLLSARR VSALPTPASRRCSGLPPMTKTMPRAVG SPLCVPAARRRSEPRKNSAMRTEPTRES SRKTDRLVDVSPDRGSPPSRVQALNFS SPEESDSTFSKSTATEVAREAKPGGDA APSEALLVDIKLEPLAVTSDAASQPLIDL PLIDFCDTPEAHVAVGSESRLIDLMTNT PDMNKNVAKPSPVVQGLIDLSSPLIQLS PEADKENVDSPLLK |
| 1559 | 9610 | A | 2509 | I | 353 | DVQLEGAKIGISTEITFTPEKIKGGIHTAY TKTAGSVCLLMQVSMPSVLFASPSQLH LKGGTGFKVAQDMATAAVRCIKKEIRDL YVNIQPVQEPKDAQFGNGNHIIAETSTG CLF |
| 1560 | 9611 | A | 251 | 986 | 1401 | LEQGCNLFILHKHS*LGEVFFVCFRRSFT LVAQAGVKWGDLSL/HKLPSSLSLPS WDYRHLPLRLANFFVFLVKMGFTVLA RMVSI*PRDPPTSASQAGIGVSPRAGP VAGILMFCRWNISNPKPGAVIEKKKK |

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| 1561 | 9612 | A | 2510 | 29 | 1262 | TKVSEL.LCGSQR.LF.LPLWRRLCRCGLG PRVSPMAGPRVEVDGSI.MEGGGQILRV.S TAL.SCL.LGLPLRVQKIRAGRSTPGLSMT *RPQHL.SGLE.MIRD.LCDGQLE.GAEIGSTE ITP.TPEKIKGGIHTADTKTAGSVCLLMQV SMPCV.LFAAS.PSELHLKGGT.NAEMAPQI DYTMV.VFKPIVEKPGFIFNC.DIKTRGYYP KGGGEVIVRMS.PVKQLNPNL.TERGCVT KIVGRA.FVAGVLPFKVAKD.MAAAA.WR CIRKEIRD.LYVNIQPVQEPKDQAFNGN GIIIAETSTGCLFAGSSLGKPGFNSDKVV IEAAE.WLLANLRHGGTVDEYPARPSIJ VFHGH*PNGVSRIK.TGPVILHTQTAPI HFAEQIAK.G*ILL*RNPEDEEDA.AKDTYI IECQIGIMTNPNL |
| 1562 | 9613 | A | 2512 | 900 | 1189 | SQHFGRRRAD.HLSSGVQDQPGQRGKTP SLLKIQKLAGRGGSL.*SQLPR.LRQREN RLNPGGGG.CSELRSDCTPAWATEGNS VS.KKNK*KKKKK |
| 1563 | 9614 | A | 2513 | 1710 | 2221 | SPLLDVYFKTR.LLSRGRRE.PACTLR.LNTI GTL.LSHCPL.GIQGPHPGPSKTCGPFKPR GPHGSCPPDKKQVPTV.LPLL.PAPLRWA QAGLP.GYAGISGSPGRPLGAQAG*GSGV IGESNYFVHCH.PRGPGSPHIL.FGG*GLQ PKPPRPRL.PSSSGSTTGLGDRKPC.SYSQ |
| 1564 | 9615 | A | 2514 | 205 | 295 | GCNGNK.DSCGPIAPSSGD.I.LLTVKRSLP R*NFSP.CA.PCSSSSKRAMCSRV.CSPWGL *CGPIAPSSGD.I.LLTVKRSLP |
| 1565 | 9616 | A | 2515 | 1 | 927 | |
| 1566 | 9617 | A | 2516 | 932 | 1688 | KGFKNPTFPCEIPAGQTHKPHHNKHSS PPVQK.LKQMKKNEVYETFSYPESYS PTLPVSRRENNSP.NLPRPSPFCMEEYQR AEL.EEDPILSARTPSPVHP.SDFSEVHNCQ PYYSADGATY.GSSSG.LCLGNPRADSIH NTYSTDH.ASAAPPSVTRSPVENDGYIE GSITKHPSTWSVEAVLFLKQTDPLALC PLVDLFRSHEDGKALLTHGVTVLPEAT WGVKLTGTGL*SLCYLH*PDLKQGKCL |
| 1567 | 9618 | A | 2517 | 3 | 179 | |
| 1568 | 9619 | C | 2518 | 140 | 490 | MAWFHDMNPQSIALIPPATTEISADSQLP CIKD.GSEG.VKDVL.VLPEXSMFEDASVS EGRGTQIEENPLEENLAGEXASQTGDGSG NEXANRGD.GSDVSSQTPQTSSDWLEXX XLX* |
| 1569 | 9620 | A | 2519 | 194 | 405 | KKILWKKIPWRGKQHLKLVTVVTTAAN RGD.GSDVSSQTPQTSSDWLEQVHLV*TA HIW.GSKWIYRYSVC |
| 1570 | 9621 | A | 252 | 303 | 551 | QEGIKSKSDENGLAPGQHGETPSLLK VSLKLAGYGGACP*SQLRRLRQENCLN RDLGGG.CSEFRSCHCTPAWTEQDSV |

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| 1571 | 9622 | A | 2520 | 1 | 2046 | MRQNSGGNVHLPAHLVLOGLVPNRPW TGKNKNKRHHLCIPQPTLAKIAKAAK GSAGNFRYPILGSPFANWVFMFFQSK ATLDFNLICSLNVKDVAEVFOKWLKIEG KKCHCLSEKTKQNMGNITTKFRKALIN GDENLACQIYENNQLKESLDPNTSYGE PYQHNTPLHYAARHGMMKILGTFLGRD GNPNKRNVHNETSMLLCCMGFQIMISEG ALHPLRLARPTEDDFRADCLQMILKWK GAKLDQGEYERAAIDAVDNKKNTPHY AAASGMKACVELLVKHGGDLFAENENK DTPCDCAEKQHHKDLALNLESQMVFSR DPEAEEIEAEYALDKREPYEGLRPQDL RRRLKDMILIVETADMLQAPLTAEALLRA HDWDREKLLAEWMSNPENCCQSRSGVQ MPTPPPSGYNAWDTLPSKTRPTTRSSVT SPDEISLSPGDLDTSLCDICMCSISVFEDP VDMPCGHDFCKGCWESFLNLKIEGEA HNIFCPAYDCFQVLVPVHIESVSKEMDK RYLQFDIAFVENNPAIKWCPTPGCDRA VRLTKQGSNTSGDSTLSFLLRAPAVDC KGHLFCWECLGEAHEPCDQCTWKNW LQKITEMKPEELVGVSEAYEDDRQ/CVC *VMN*TAKPCANCKSPIQKNGCNHMQ CAKCKYDFCWCLEEWKWT |
| 1572 | 9623 | A | 2522 | 2 | 119 | ESTVSCCEKPTRGAMP*MHTACGRPCPSI WRLTKLSMLRL |
| 1573 | 9624 | A | 2523 | 159 | 627 | LGRMQDPOGGQMRWAYSITFAKDVQC LGLSHYFAGAASGGCAQARCGPGR* GPPAPVPSPLALPPMGTRKLLHPGMWT ALH/VRIP/VPKGEQCVQLIGEISVLLQK ASWSEASTLCPAKGAIPNGAAFHQRGR PEAHLGHRLSLAPPREPVET |
| 1574 | 9625 | A | 2524 | 3 | 307 | |
| 1575 | 9626 | A | 2525 | 1053 | 2813 | RTWEKAPEQADLTGGALDRSELSERSHL MLPLERGWRRKQEGAAAPQPKVRLRQE VVSTAGPRRGQIAVPVRKLFAREKRPY GLOMVGRLTNRTYRKRIDSFVKQIEDM DDHRFFFTYWLTFVHSLVTLA/VCIYGIA PVGFSQHETVDSVLRNRGVYENVKYVQ QENFWIGPSSIDLHLGA*ISPCMRQDPQ GLSFIRSAREREKHSACCVNRNDRSGCVQ TSEEECSSTLAVVWVKWPIHPSAPELAGH KRQFGSVCHQDPRVCDPESSDPHEWPE DITKWPICKNSAGNHTNHPHMDCVITG RPCCIGTKGRYVCVPASAAGLWAQSIAL GCEITSREYCDMGRGYFHEATLCSQVH CMDDVCGLLPLNPEVPDQFYRLWLSLF LHAGQVTILHCLVSIQFMVLRDLEK LAGWHRIIHYLLSGVTGNLA/SAIFLPYR AEVGPAGISQFGLACLFRGSSSRAGQIL GAALACLQACWLWVLFHLWGLLP WDLTTFAHIFGSSVALFLSFAFLPYISFG KVRVPETLPDHLSSGGLPRASWLAWW SSSTSILSAVSRVSSPASPFIDKLL |
| 1576 | 9627 | A | 2526 | 1 | 936 | |
| 1577 | 9628 | A | 2527 | 1 | 1023 | |
| 1578 | 9629 | A | 2528 | 157 | 512 | LG*LQPPPPGFKRFSCLSLSSWDYMRH HAWLIFVLVEMGFTLISASRVAGITGM RHHAWLIFV/CSRDGVSTCLGQAGSQT PDLKVICPLGPPKAGITGVSHCSWPVIY VLSTLLHAVRNVLFRKTFPLKSSFLSYD KEIFPILGLKFVYVLTLSFVKGHILLK |
| 1579 | 9630 | C | 2529 | 11 | 133 | MFCSLQPTDLRKEXMNLQTLRLRSSNKH QRFFGLPRGLCD* |

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| 1580 | 9631 | A | 253 | 3 | 401 | STFGFOGTGWETRWGPT*PGVSAWSLVP SPVLETPDLERKRAHLGVATAGGAPGP YRLSPHTLSSRRKGKGEASKGTAEALM TIGIENSTQSCLSLSPSFHYFWSPRGAGP KAMWLVGDRKGATKNDKROY |
| 1581 | 9632 | A | 2530 | 367 | 676 | KVVTILILQRRKWGA/PGSDPKSPCCSD SKQASFTAP*CSYLYTADGRGLAWG* GLNRSAMTSPNDQTHLVAQTSKGPERK HKVSGFLVKVIFATAYDNG |
| 1582 | 9633 | C | 2531 | 156 | 683 | MKLQRWRHPAHFSGTGKMIGEGTQVS VGTGVTVDTGVGCLSTSSHYANRNADT FRCLCRKRCQRI.LKSQRGGVKKSCISVP HRQLSQALQAMRDSSEPWALSIKSLFRE DEALASKHYRRNAPRAALROFLSDFHR DCLNVFKTKYHTLMYMGRTIMRCEPCA CGGEGKKNVLF* |
| 1583 | 9634 | A | 2532 | 427 | 458 | KNSQYTPLTLIQMMGF*FFVE/ERQSHSV VEAGVQSCSHGSLQPLPGSSNPPTSASR VAGTTGAHHHDLILFL*RRGFALLHRL VSNWSRSDSAWPSAFPKWGLWDVEA TTPRGLFSLHVG |
| 1584 | 9635 | A | 2533 | 57 | 463 | ARTPLQAGAGGLVLRLLSLPLPLGSLPFT VSCARWPLCRPWSSLPGFWDSWHCNH RTGHRTGPGGLDQSA*YNKLIWGKGN HL*PQATAQLWPQLGGWQGWTRPS/RW WPLSSPHC*PGYRSLKDSFANTELLF |
| 1585 | 9636 | A | 2534 | 3 | 469 | RKTTATMTSLCRKVNGGHAG*ETLRLR LVVYPWTQRFDSFGLNLSASAIMGNPK VKAHGKVLTSGLDAIKHLLDLKGTFA QLSELHCCLKHVDPENFKLLGNVLETVL AIHFGKEITPEVQASWQEDGDWSGQSP VLIQPLSSLAMMQSCQG |
| 1586 | 9637 | A | 2535 | 41 | 676 | APSPRRPWGHFTEEDQGLLSTSLWCKV NVEKCKWEKTPGKGSVVPVWPTQRFF DSFGNLSAFAHHGQTPKVKAHGKK VLTLGRCQOSTLDDLKGTFAQLSELHC DKLHVDPENFKLLGNVLTVALAIHFGK EFTP/ERLQASWQKMGD*SGQCPVLQI PLSSLPMMQSFSRIRLLFLQAITNKNKIS AKRSHMIFFSFFYIFLNI |
| 1587 | 9638 | A | 2536 | 107 | 331 | |
| 1588 | 9639 | A | 2537 | 386 | 1074 | NNPEWRTLIYVDKENGEPGTRVVAKD LKLGSGPSIKALDGRSQSVSTPRFGKTF D/APHPALPKAT*KGFGELSTGATEKSVK DPGDPLKQKNGAFSGPKKMDLKKDCL KOKSSVSWPSGLMNPKNKTKFFPLQIL LDF*GVFD/LCPEEHPDLRIJPLSLGVPL MIPLTREREL*KSWFQLGPPFHLWKDGP LPPWGIPICLQFSFGISVRTWGVLDLPPV CCDID |
| 1589 | 9640 | A | 2538 | 1 | 359 | |
| 1590 | 9641 | A | 2539 | 1 | 483 | FQLEVTPQNITLNPFGGPGVFSWRDQAV LRQDGVVVVINKRNVLVSVDDGGTPE VVLHRYWKGSSVHQDFLGFYVLDSHRM SARTHGLLQGFHHPGFEVSDIHPGSDPT KPDATMVGLQKDYSKDPWHGAEVSCW FIHNNAGLIDGAYTDYIVPDF |
| 1591 | 9642 | A | 254 | 1833 | 2126 | EKRKRGRFFKTKPLKCPGPWGESRFW GPPKGSQV*G/HI*MGPNLGERWKKGP KRPKPKTKGPPPGVHPKRRNPHLG/ WFGPTLLKGGKNLNGFC |
| 1592 | 9643 | A | 2540 | 3 | 310 | EVRLANLSSQALRMWLDYGFVPTLTSMSI RGMADQDGLKPTIDKPSDSPPLEMLGP RRTFVLSALQSPSTHSSSNTQRLPDRVTG VDT*VVV*PYVLCWNLC |
| 1593 | 9644 | A | 2541 | 1 | 1482 | |

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| 1594 | 9645 | A | 2542 | 37 | 2885 | SMDGAMGPRGILLCMYLVSLILQAMP ALGSATGRSSSEKRQAVDTAVDGVFIR SLKVNCKVTSRFAHYVVTQVQVNTANE AREVAFDLEIPKTAIFISFAVTADGNFI GDIDKDVTAWKQYRKAAIS*EKAIGLVR ASGRTEMEQFTIHLTVNPQSKVTPLQTYE EVLKRNMHQYEIVIKVKPKQLVHHFEID VDIFEPQGISKLDQAQASFLPKELAAQTIK KSFSGKKTNSGSHRRFPQGHVLFRTVTS QQQ |
| 1595 | 9646 | A | 2543 | 159 | 1222 | NNSGVMPEMPEDMEQEEVNP**GGFW VTGCHWGLGRAVHKEFQNNL/WHA VGCGFRRARPKF*TG*ICWD SNAV/HHHI HDPQPHVIVHCAERRPDVVENQPRCL PLQLNVDSAGEF*AKGKAAACLSISPF YI*AQVVFV*WEPNPPYUREEDIPAPLNL YGQTKLDGRKGPWRNHLGAALRIP LYGEVEKLEKCCCELLMFE*KCQFSQQS PAKQWIHWQARGSPPHMSKDVAPLCAR QLAEKRMOLDPSIKGTFHWSGNEQMT KYEKGMCQLPDAFNLPSHLD/PTDTS VLGAQRP RNAQLDCSKLETGLIGQRTPF RIGIKESLWPFLLDKRWQRTVPH |
| 1596 | 9647 | A | 2544 | 211 | 463 | |
| 1597 | 9648 | A | 2545 | 188 | 366 | SCQSACQKNGKIHLRLQLLP*DRLEDTL LNTHGLLQSQILCQFCLCTCQKVLRI K |
| 1598 | 9649 | A | 2546 | 1257 | 1441 | |
| 1599 | 9650 | B | 2547 | 74 | 733 | MAWKSGGASHSELJHNLKNGIKTDKV FEVMLATDRSHYAKCNPMDSPOSIGR VQLVVGDRMGYAEAPYDAIHVGAA APVVPQALIDQLKPGGRLLPVPGPAGGN PNVGASIPGSRMASIQNEALWMGDIRA L* |
| 1600 | 9651 | A | 2548 | 45 | 972 | TVQPHVSGSGDGDGNSGVSQDASGAV TVWEVVSLLGKLLGTVAALKVVLVYLLR VCLAMAWKSGGASTSELJHNLKNGIK TDKVFEVMLATDRSHY/SQKCNPMDS POIK*GFQATISCSTHCNAYALRNFLEWI QLAHESGLKLFVSGSGKWSLACFAR MVGCTGKVIQNDAH*RS**DSDVKLMF REGTITLTLSEFGGVQLVCGGMGRMGY AEEAPYDAIHVGAAAPVVPQALIDQLK PGGRLLPVPGPAGGNQMLEQYDKLQDG SIKMKPLMGVIYVPLTDKEKQWSGGM VKATSA |
| 1601 | 9652 | A | 2549 | 2 | 478 | |
| 1602 | 9653 | A | 255 | 70 | 380 | YSNNPKDRKGETGINEKTNNKMVDLSS YTSVITLNF*ML*/D/KIN*KFVKSP*KKPT LCCLLETYFKYGIGGLKVKRWKPI*HAH TIGKKTILVAILTKHTISELS |
| 1603 | 9654 | A | 2550 | 392 | 1245 | CITFKVFLLRIRWYRNMLLKNSTPLPS CHPSAQLGTLMRALSQVFRDAW/VVW ASVDVVENEEASIIKMTDSFTEQAD QVTAEVGKLLGEEKVDAILCVAGGWA GGNAKSKSLFKN\CDLMWAEAHYWTSD HLP\SHL/ALTKHLEGGGLTLAGAKAA LDGTPGMIGYGMAGAVHQLCQSLAGK NSGMPPGAAIAALPVTLDTPMNRKS MPEADFPSSWTP*FLVETFHDWTKGNR PSSGSLIQVVTTEGRTLT/PAIFLGLISV PMRWPAQKSH |
| 1604 | 9655 | C | 2551 | 60 | 266 | MSWLSCLNITVWNISPVLLSFFGNGSL SHLXKPIEEEPFLTPLSSSPGFXPVPR VLRQSATV* |
| 1605 | 9656 | A | 2552 | I | 513 | |

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| 1606 | 9657 | A | 2553 | 345 | 2343 | LLGHEQTRKKGRKAKAAGMVLSQLGL TFRDAIEFESQEEWKLDPARQLTYRVD MLENYRNLVSLGIFSKCEIKELPPKRESN KEKYRSRQ*CWKDMKSHRHTKIFCFRETQ KNVHDSQCLWKHD*RHYKRVVRYTYKG KSH/VEETMPG*KG*CHKSQPC*KSSLG LNPAVT/CLPRTCQIPISKPEGKIYKYDHM EKSVNSSLSVPPQRISSSTVKTHISHTYEC NFDVSLFTQKEKANIGTEHYKCSERGKA FHQGLHFTTHQIHTKETQFKCDICGKIFN KKSNLASHQRIHTGEKPYKCNCEGKVFH NMSHLAQHRRHTGEKPYKCNCEGKVF NQISHLAQHRIHTGEKPYKCNCEGKVF HQISHLAQHRTIHTGEKPYECNCKG/KVF SRNSYLVOHLIHTGF/KPYRCNVCCKVF HHIHLAQHRIHTGEKPYKCNCEGKVF SHKSSLVNHWRHTGEKPYKCNCEGKVF SRNSYLAQHLIHAAGEKPYKCEDECKAF SRNSHLVQHHRIHTGEKPYKCEDECKVF FSQNSYLAHYHWRHTGEKAYRCNCEGK VFGLSHLAHDPKIHTGEKPFKCNCEGK AFSMRSSLTNHQRLHTGEKHFKNCEG KLFRDINSYLVRHQRFHAGKKS |
| 1607 | 9658 | A | 2554 | 3 | 517 | STRQNVLGEKGRRIELTAVVQKRFQF PAESRLYKLLGLAVRRACYGVLRFIM ESGAK/GCEVVVSGKLRQRAKSMKPV DGLMIHSGDPVNYVDTAVRHLVLLROG VLGIKVKIMLPWDPTGKIGPKPLPDHV SIVEPKDEILPTTPISEQKGNAEPPAMPQ PVPTA |
| 1608 | 9659 | A | 2555 | 3 | 493 | |
| 1609 | 9660 | A | 2556 | 24 | 861 | INPPPPRLSFORSAARWPVQSKRRKF VANGILSKLNLNEFLATRELAEDIGYSG VEVVRVTPTRNRKSFIFSHQKHRMVLGEK GURRIELPAVVQKSFQFPRGAAYELY A*KRWPT*/RGLCAICPGQSLCVYKPS*G GLAVRRAL/CYGV/LRGSGFGEVGPKGCE VCGCLGKLRGORA*NP*SFVDGLMIHS GDPVNYVDT*VVRHLVLLROGVLGIK KIMLAWDPTGKIGPKPLPDHVSIVEP/ RRDEILPTTPISEQKGKPEPPAMPQVPT TA |
| 1610 | 9661 | A | 2557 | 116 | 718 | IFLOAGCLKLVIRSKAGDISHVDTHCQTV HPKAVSITMTENTPFLTSPALSPFINDL PFQCIK*YLIJLITFLIAYEVESLCL*SVF LIYKIFL*PLSNFCL*VLLYIILNLFY MYFPTPLFMKSNFIKVL*KVKGFTE*KCS QIYLFHGYVWVLCGLWELSYITITIFQ YFLVIFNFHV*FIILFIHDMK |
| 1611 | 9662 | A | 2558 | 88 | 811 | GSNGHNSVCCDTMEGGGSGDKTTGV AGFFGAGGAGIYSHADLAGVPLTRMNP CPYLVNDVPRYLVOGYKMFIFITPELIK TRGQDLKLAFFITGGCCMTGAAGFAMN QLRLGLKETONMAWSKPRNVQILNNG *LKGLAWANTLGLWALLYSAGVWII EKTRGAEDDLNTVAAGTPAGLLYTCTG VGLRGIAWGGTLGLTSLSLCTIYNTWG AHGKGLASNSSLWKVFAQPP |
| 1612 | 9663 | A | 2559 | 1 | 210 | VIHRLPIGKKLFRCKFG*TWAPGHL*SGR PRSSSSSPF*N*MHFLFERESSFHRCKWK AGITCVKSWYP |
| 1613 | 9664 | A | 256 | 225 | 333 | RWGFTQLRLRLRQENHLNRGVGGCSEP RLCYTPAWATE*DSVL |

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| 1614 | 9663 | A | 2560 | 128 | 687 | THVLWAFPGARVHLQTGSWRAGVAAA ALALGGQASLSYARGKES*GHSPPTHT HKAASGGREKAVSPSVAVVSHGPSLLS EYTSQVKGHSGPGDPVVTIHLWAFPP DQLPPSPCPLSRKEPEPSLHPPQGVTP GQAQIGQLRTSLGLWGHKRGOWARAEG APVSLLLRGPFDGPAVSEARQ |
| 1615 | 9666 | A | 2561 | 246 | 410 | |
| 1616 | 9667 | A | 2562 | 1 | 414 | AWHEETHKVDLGLPEKKKNKKVVEKE TRYSVLNNDDYFADVSPLRATSPSKSVA HGQAPEMPLVKKKKKKKVSAALGKE VKRSQSKLRLRNTSP*VMTLRPPQRKR*S PKRR*SSQSSRSQK*KGRKRRRGKRG |
| 1617 | 9668 | A | 2563 | 198 | 531 | RNNPLLSLLALCLVHSSHLCJWALPDEG GGQKGERALNSRKIATFLLSQGTQFGG WDTAGFENEDQKIKFLRLMGGFKNLSP SFSRPASTIARPHMALGKKAADSLQQNL |
| 1618 | 9669 | A | 2564 | 190 | 510 | |
| 1619 | 9670 | A | 2565 | 1 | 1977 | MEVDFKIRKVGQWTTILQEHPSVLLFIE ETHPENKPTSAVEESHISRDVTMVNFQ CQLDWSKGYLEAYLTKINSICSHRLLD GSVTCHEDETGSSRDARDTVGTGVRVND ESVEQLGLRRTMWLGICRGAAMAAVST VTAAGRPFRPGRSRNPRGWAGDSKWTS GSRRSWSLRGGGEISPTGMITKTHFVYL GLPEKKKKKRVVKEPETRYSVLNDDY FADVSPLRATSPS*DVVAHQAPEMPLVK KKKKKKKGVSTLCEEHVEPETTLPARRT EKSPSLRKQVFGHLEFLARGKRNKKSPL AMSHASGVKTSQDPRQGEETRVGKKV SKKKKKKKGGPGPHSLPVQDWPWFCEA REARDVGDTCVGGKDEEQAALGQKRK RKSPREHNGVKKKKQJHGEQDALPGH SKPSRMESSPRKGSKKPKVVEAEPYIP ISDDPKASAKKKMKSKKKVQEPVIEEPA LKRRKKKKRKESGVAGDPWKEVVPFSE MDFAVGELRETDITDLEVVELEKGNMDE AHIDQVRRKALQEIDRESGKTEASETR KWTGTQFGQWDTAGFENEDQKIKFLRL MGGFKNLSPSFSRPASTIARPNMALGKK AADSLQQNLQRDYDRAMSWKYSRGAG LGFSTAPNKIFYIDRNASKSVKLED |
| 1620 | 9671 | A | 2566 | 1781 | 2148 | VRRFAAAVATLPPGAAPSG/PAPGT/PGP QTRIPGFPWPLCPMLMSGSLQ*TRILLV PPAPQGPAGSPGPIQAGRLAAPPQPLS PSRGPACGSSWELRLEGLSDWGTCPVPC PCHYIHPKN |
| 1621 | 9672 | A | 2567 | 1 | 345 | |
| 1622 | 9673 | A | 2568 | 1 | 582 | SGRALHASWAAGVGAYSRLRSDALE GESFALSFSASDAEFDAVVGLEDIIM DDEFQLQRNFMDKYYLEFEDTEENKLI YTPAFNEYISLVEKYIEQLLQRIPEFNM AAFTTTLQH/HIRDEVAWVTFIGNAGST FHKIPLGF*RKCLDYRAEKESRGLDLS SGLVVTSLCKSSSLPASQNNLRH |
| 1623 | 9674 | A | 2569 | 2 | 705 | GSVGAATVRPOPNALRCRLSRAGRSPV LVFGVGIKQPPCKSKAKTKTKKR*QJR ATSNVIFAMFDQSQIQGVQRPFNMDQ VNRDGFHSDK/EKVLHDMLASLGKNPH* WHYLDAMMNEGPKGPFKFHQCSLTMF WLRKLNQVTRSPEDCHPETAFCFAFD*KK ATGTHFRKDYLRRC*PIHGGIRFPD/ER EVDELVRGGTLLDQKKGNFQITFEFHTA SWKHGSQRPKMT |
| 1624 | 9675 | A | 257 | 238 | 512 | HMYVFNPLRTSKYMKRTLIELKGEIDNNTI LVGDNTTSLTMGRTR*DISKETEDLHN TVDPMDLTD/SAELSTQQQNTLSSQAH GIFSRTE |

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| 1625 | 9676 | A | 2570 | 1006 | 1022 | TRNSFLFFIYIYLFMRMGSCSAVQGWKCS GTILGHCSLCLRLPGSSNSPTSASHVAG D/SHGMCRRHARLIFAFVEMGFHPCWP GLGLELLTLRVHFITLGLPKCWGL*AGG SAKIGRRRAQIG |
| 1626 | 9677 | A | 2571 | 668 | 863 | TFCFFSDLYKSLASCENHLVCLFVCFAP LV*TYNFCI*TVNLIFSVRTLCPFI VLIIT |
| 1627 | 9678 | A | 2573 | 258 | 579 | FKQICLFLLLFFEMESCSVTRLECSGTIS AHCNHLHPGSSDSPASASPTGTGTCH HAQLIFLYFYMTGFRHVAQVGVLELGA *AIHLPLWPKVLGLQAPAPDL |
| 1628 | 9679 | A | 2574 | 157 | 371 | |
| 1629 | 9680 | A | 2575 | 1 | 1431 | MHKAGLLGLCARAWNSVRRMASSGMTR RDPLANKVALVTASTDGIGFAIRRLAQ DGAHVVVSSRRQKNVDQAVATLQGEGL SVTGTVCHVGKAEDRERLVATAVKLHG GIDILVSNAAVNPFFGSMVDVTEEVWDK TLDINVKAPALMTKAVVPEMEKRGGGS VVIVSSIAAFSPSPGFSYNYVSKTALLGLN NTLAIELAPRNRVNC LAPGLIKTSFSRM NLGEPEDCAGIVSFLCSEDASVITGETVYN LSVMFTGGGVCRASWKEGGTGTPTPT RESPROQEPGETSSTDQENKVNWGLPA NPORPAEAGPVRRTKNQKGIASAKD SINIRTKGDIHTKTPSIGHQHQRPKYDKT TKMERNQSKKAETSRNQNVSSLPKEYKS SPAREQNWMENKFDDLTDVSFRSIVITN YTQLKEHVLTHCKEAKNLDKMLNEWLT RMKNLEKSLNDLMELITTQELHEGYTS FNS |
| 1630 | 9681 | A | 2576 | 201 | 398 | |
| 1631 | 9682 | A | 2577 | 195 | 434 | |
| 1632 | 9683 | A | 2578 | 150 | 284 | |
| 1633 | 9684 | A | 2579 | 1 | 625 | MHKARLRGHCARAGKSVRLASSGMTR DPLTNKVALVTASTDWIGFAVAQRLAQ DGAHVVVSSRRQKNVDQAVATLQGEGL LSMTGTVCHVGKMKDWERLVATGFSPY NVSKTALLGLAQTLPIELAPRNRVNC APGLIKTSFSRMLWMDKEKESMKETL RIKKV*ASPEDCAGIVSFLCSEDASLHSL GKTVVVDGGTFSRL |
| 1634 | 9685 | A | 258 | 167 | 408 | DRRITRSGVRDQPGQHGETPSLLKIEKL AGHG/QGAPVCGGRSYRLRRLQENRLNP GGRCSEPLRHCTPA*VTVRDSVS |
| 1635 | 9686 | A | 2580 | 84 | 1413 | ARKSVRMASSMRTRDPLTNKVALETA STDGIGFALARLAQDRAHVVISRKKQA NVDQAVATLQGEGLSVTGTVCHVGKA EDRGAAWWPPAVKLGHGIDILVSNAAV NPFFGSMVDVTEEVWDKTLNINVKGP P*MTKAVVPEMEKRGGGSVVIVSSIAAF SPSPGFSYNYVSKTALLGLTKLAIKLAP RNIRVNCLAPGLIKTSFSRMLWMDKEK EESMKETLRIRRLGEPEDCAGIVSFLCSE DASYITGETVYNLSVMFTGGGVCRAS WKEGGTGTPTPTRESPROQEPGENQARS SPRMALRFEFFPESASTSWMGPEVGNK ERPCKPARKVGASPRALRRLGSATRMLS RAALRAGVGARAPRPGGGRGAHATATV WSGLASAAALTARALLKRSACAAAPQ RCGWRLRLCSSLGIKSGWPCPPWSSI |
| 1636 | 9687 | A | 2581 | 1 | 560 | MVYRQNLQFPSSCAPEMGREDGLRALHP AQPPFPRAQQSPFPLSA/TEEPFRAQ SPFPPLTIPHRHPQSPFAPSALSQRQ POLYSAVTFPSGLSGPRTSTCTFSPASSP AHGLGHIHNTDAGVCSLEAQEAKAPG RQPSCSAHGALGFTCTSGVAGDSGPVVG SQERALDPRQGLQH |

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| 1637 | 9688 | A | 2582 | 775 | 1408 | TIPVAYVWADPPLPPKGHSCHPHGGSD/D GTRTTGT/APPLGFGQDPPVHPAPAPP DW**FPNMGGPGPPPPFTWRAQLQLLK SSVNMGRGHRWRNVFSGPHLEQISLSEL GHSHKPLFLRQNPNTVPWDVMLPPLL NLLYGKMWNVVSLDLWGCHRNEEWRP TNILLAPWRHGRQLKGAGARGRLQFQ LLLALLLLVGVEMSF |
| 1638 | 9689 | A | 2583 | 3 | 560 | GVPPKSASKFLCTRNGKRWASQPPST AVPPRAQQSPPPPLSAQK/KPPPPRAQQS PPPPLLTPHRRHQSPFAPSAPSALSRQRP GLYSAVTSPGSLSGPRSTCTPSPASSPSA HGLGHIHTDAGVCSLEAQEEAKAPGGR GPSCSAHAGLGPCTSGVAGDSGPVVGS QERALDPRRQGLQH |
| 1639 | 9690 | A | 2584 | 189 | 608 | AFLTfNKLHRTDTCRGNKHPHPPPGSK VRKRTWGFAPPGGSPWASLPHGLPPTA GRQGRGR/EGGQPRGGPGKGSQAQSSGT RAWRKPMGGCLTEDGPYGGPKGLWP*T TNG*K/PPGARWPPLPLGCPLEPRHPVL GP |
| 1640 | 9691 | A | 2585 | 2 | 847 | LKMAAEEPHQKQEPGLSDSEGVNCLA YDEAIMAQDRIQOEIAVQNPLVSRLE LSVLYKEYAEDDNYQQKLDLHKKYSY IRKTRAIDGNCIFYSGRFLPLGRHCWDDS KELQRFKAVS/WPRARVDLGCSQ/WGFT *ISOQ*GIFHNKFHGT*LSRWRKQTSVAD LLASFNDOSTSDYLVVYLRLTSGYLO RESKFTEHFIEGGRTVKEFCQOEVEFPMW KESDHIHIMALAQGLNGAQGEDMDRG EGGTTNPHIFPEGSEPKGYLLYRPHGYDI LYK |
| 1641 | 9692 | A | 2586 | 468 | 1191 | DVSRVGLPSPSRAMGWTLALLRRGSAV SALASGLVEEPMGLPPFHPTRFKAVSA KSKEDLVSQGTFTEFTDHFNTMDLIEQ VEKQTSVADLLASFNDQSTSDYLVGYLR LLTSGLL*GPRASSSTSSKGGRCCKPEF CQOQLEPM*KESDHHSHHCAGPGPSAC PSRVGVHGTAAEGGNHQSALSLRASEP KVYLLYRPHGYDILYKIGLGSPLPCCP PLPGARHVTEVFLWL |
| 1642 | 9693 | A | 2587 | 1 | 326 | HSVNRRKRLNRNARRKAAFRPE/CVRGLG FRVAVGLRGDGRDDGSAMSLFAGSSHI RHAWDHAKSVRQNLAEMLAVDPNRA VPLRKRKVLTWQGLGCLLYSPAILT |
| 1643 | 9694 | A | 2588 | 879 | 1528 | AAGAVVSAMPKAKGKTR*QKFGYSTL RKRIMSRNARRKAA/RAGLECSHHRHAW DHAKSVRQNLA*MGLAVDPNRA/VPSR KRKVKAMEVDIEEEA*KNLRYKPYVLN DLEAEPSPLEKKGNLTSRDLHLMYRY MVENHGEDYKAIA/IDEKNYQDITPK QISELSNVYKRFYPAEQDQFLLDSLQK RKMEVKVPLHHSCPSAEASPGPSEAG |
| 1644 | 9695 | A | 2589 | 1 | 310 | |
| 1645 | 9696 | A | 259 | 660 | 1200 | LTVGKKNRQKQHQPKSPHGKPHLKGG QPSKVQIEDKFLGR*GKELKNPTTQKG QSGFVYSKLJHNTSYRQHGSPGWRRLRW MN*QK*ASEGG**QTSLS*RTL*PNILR IPELKDWFESKIRQK*KRIKKEENLO*V WGYI*RPILQITGIPERRVEISMHWVRAC SFSSVKFVIP |
| 1646 | 9697 | A | 2590 | 1 | 716 | SALQRLEKKPKPRPPERSPRPRVWPPEOL EVGGACALSQAQSPSEKLDPACLKPLS** IRRRRPTPAMLFRLSEHSPSEEEASPHQR ASGEGHHLKSKRPNPCAYPPLSKAVQR IAESHLQSYSAILNENQGRGREDELGE FWELGYPREDEEEEDDEEEEEEEDSQ AEVLKVRQSAQOKTTCGGQLEGFWERP PPLDESERDGGSEDQVEDPALSEPEEQPO |

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| | | | | | | RPSPEPGT |
| 1647 | 9698 | A | 2591 | 39 | 370 | RGWSLVQTPNPRFKNVPGPPTQVIAEC EESQCGGLGTGLGL*LSPGPG*TDSPGPF MMPSEAQGGGAASKGPI.GPPQAAGIHQ GTPLRMGEALEGQAGQTAGPRVQDGL |
| 1648 | 9699 | A | 2592 | 229 | 358 | |
| 1649 | 9700 | A | 2593 | 257 | 386 | |
| 1650 | 9701 | A | 2594 | 217 | 398 | KAWWNLLRKSEPKSCGS*GGLSTSRERL VECSSPLGLGYCG**LCHLQEPHYGSLH RMSS |
| 1651 | 9702 | A | 2595 | 1 | 3386 | |
| 1652 | 9703 | A | 2596 | 442 | 2093 | CGFLQMGTVINHNIPGEGYWHFFHFN KALLARAAVGAARGIIHHRCGLTKRPDA RRRRVAGAQGREPAISLPGDRAAGARAT RTRGPGAPKMPAIAVLAASAAAAWCFL QVESRHLDALAGGAGPNHGNFLDNDQ WLSTVSQYDRDKYWNFRFDEVEDDYF RNWNPKNKPFDOALDPSKDCLKVKCS HKV/CVTDQYQALCVSRKHLPRQKE WGTWAQKHWDLD*ILVKCKPCPV* QSAMVCGSRWATPNSIPCKLEFHACS TGQK/SFATLCDGP/PCSSQSLEPPKHG RKGVPC/TDKELRNLASRLKDWFALHE DANRVIKPTSSNTAQGRFDTSLPICKDSL GWMFNKLDNMVYDILLDPSEINAIYLDK YEPCKPLFNSCDSFKDGKPLNNEWCLL PSQNPGLP/CAQNMENRIQKLSKGS LGAFIPRCNEEGYKATQCHGSTGCQW CVDKYGNELAGSRKQGAVSCEEEQETS GDFSGGSVVLDDLEYERELGPKDKEG KLRVHTRAVTEDDEDEDDKEDEVGYI W |
| 1653 | 9704 | A | 2597 | 1 | 844 | LHQQAAVAWLPTSFLPSQEHCCSTEWR APQPAASGVHIGICF/RFFASSTVSYES GSFCYLPAPWVYVGLL*TERPLAWWCL GKYWLOELLGCHVPVPLAML*DCALLK SSLVPMGSPTHCKAIVTEPLILPEPAAA AAHTSSPSSSCRCCKGLGWVWPGGSAP GPLGLSFDPPWTVYHSQSGPSAAPGPTTS SS*RFSAPSHOMQGLADSQHLCHRHSRK GLRSFLLSHTHSTCPPHLLQTOMPRSP ISIDADSSPPIHRLRGQGHFSOLAKGGQ R |
| 1654 | 9705 | A | 26 | 238 | 446 | GFVVSLSDR*QGWESRSSIIHAIVTN*ASS SSSSSSSSSFRVYVPRFIEYLHKDIQSTG QKSPDAWVAGG |
| 1655 | 9706 | A | 260 | 1 | 680 | EQCRSPARARLQOPDPASTEAEERTPY GSIGAPAGEGKVPGLVIYLLWPWQNDQ ALSCLPSEAYSLSRQHLPLAVNTMSAG GGRAFVAQVFPMPPTCRVYGTVAHQD GHLLVLGGCGRAGLPLDTAETLDMASH TWVVALAPLPTARAGAAAVALGQVILV GGVDEVQSPVAAEAFMLDEGRWERR ATLPQAAMGVATVERDGMVYVSSGGNG P*HGPPGPGT |
| 1656 | 9707 | A | 2602 | 144 | 520 | IGKEEIKLLLPDNLMEYTVNF*MYKPLE LIS*FSKVTEYQVNTK/NCIYT*QLQIE NEIAKT*FMIASKSIKYLEISLTKCNKW RDILCICIGRLSIKVLVLPKLMCGGEKIF NPNTGFW |

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| 1657 | 9708 | A | 2603 | 105 | 440 | RSTPDPVCLGIRSSGCRDTADREP*MLLS DRSSGSFVSEYPAPV*SVSLPLLGECLPV RLLRDGHWS*HDSOSS*VFKMADNPPA GFHRLGRSDGAEHRRCCLASQRC |
| 1658 | 9709 | A | 2604 | 1 | 1047 | |
| 1659 | 9710 | A | 2605 | 1 | 690 | |
| 1660 | 9711 | A | 2606 | 210 | 424 | |
| 1661 | 9712 | A | 2607 | 651 | 835 | PRWSRFPDLVICPFRPKVLGLQA*AIVC ASISITKMWLRNAGLTSSMNWPRRSARV LSVS |
| 1662 | 9713 | A | 2608 | 198 | 755 | |
| 1663 | 9714 | A | 2609 | 1 | 1305 | MMRAIHAPPTAVPACTAPRAPPRDHRA GIAREALGRTRGSFRDCLGTREVALQA REKAQAAAWQGEAGCSAHVVRHTRGA APEGRPRVPRAAGVLTGCTVFRRTWIQR DAQIARQERWAKGSGPWGELRGLAT QPAVRASGRRRRLERQDILEVFRCLAA SWNGGFGAVKPPEVADARSGLSGDSF CLVSVSLTKTAKKGLELKQNLJELRKC VDITYKLFIFSVANMRNSKLDIRNAW KHSMRFFGKNKVMVALGRSPSDEYK DNLHQVSKRLARGEVGLFTNRKTEEVN EWFTKYTEM DYARAGNKEGFHC*AWD PGPLEQFPHSMEPQLRQLGLPTALKRG VIVTLSDIYEVCKEGDVADPRARARS* KLFVGMRLWNFKVTIPNYMWDQSQRG QQIGKTDLPESAIEFFPEESDSEDDDD |
| 1664 | 9715 | A | 261 | 1 | 403 | RTRGQLNRGVYGPRRSLSVPTLAGAPL AGRLDETSGEEQTLTLCGKMSGPTQPP AEGTEGTAPCGGAPVPPNMTSNRRLQQ TKAQVEEVDIIPVNGDNVLRDRHKLRE LDDRSVALQARA*PFESSAAS |
| 1665 | 9716 | A | 2610 | 319 | 632 | GEPNISGMSLPWGPGSGTGMPAPAMPL PAMITPQC/C*QGQPVGPCCAS/CASA/CFR CGL*AGRFC/G/PCGHC*CFYFSNSVFPN VECMGLREPAVLPAFHLGEEAGRISGQ GRSQNLPA |
| 1666 | 9717 | A | 2611 | 156 | 621 | LHVPMELQSHSKDEVSPYTLGMSLPGVA PLGSTGDASPCAPPWPQCSKQGGP CCAP/WCP/CCP/CPCPWSHGCL*LLCDP CPPPALPAEAGQQPLCKLASAVGVYSR LGNFATCPWPLLMRPASSFRWKAGRTA GSLRPIHSTLGNTEFEK |
| 1667 | 9718 | A | 2612 | 1 | 585 | |
| 1668 | 9719 | A | 2613 | 1 | 1047 | |
| 1669 | 9720 | A | 2614 | 1 | 1674 | MRSQGEVRRYLKRQSCRFGLSREKDM VTPSASSVCLIDEQIPAAAGESYDIDPRSK HKFKIHTYGSPTCDHCQSLLYGLHQG MKCDTCDMNVHKQCVINVTSLCGMDH TEKRGRYILKA EVADEKLHVTGKACSSR SSIVGRHLDEGYTDIKAGPQLDAFLCISS QPPFGNIAIITSSSSSIITLLKHGPRFYF ASCSMSSTSVTNPKILGKFIDS VVV TCHPGMDCDWRADMGWGPVRLCWF S |

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| 1670 | 9721 | A | 2615 | 3 | 2089 | RQPLPGGKRWLGGMADVFPNGDSTA SQDVANRFARKGALRQKNVHEVDKHKF IARFFKQPTFCSHCTDFWFGKGQGFQCC VCCFVHVKRCHFEFVTFSCPGCG*GDPTL DDPRQATRFRKJHIVYGSPT/CDH/CVGS LLYGLIHQGMKCDCTDMNVHKQCVLN VPSLCGMVHTEKRGRIYLKAEVADEKL HVTVRDAKNLIPMDPNGLSDPYVKLKL PDPKINESKQKTKTIRSTLNPNQWNESTF KLKPSDKDRRLSVEIWDWDRTRNDPDM GSLSPGVSELMKMPASGWYKLLNQEEG EYVNPVPIEGDEEGNMELRQKFEKALG PAGNKVISPEDRKPQSNLDRVKLTDF NFLMVLGKGSFGKVMMLADRKGTEELYA IKILKKDVIQDDDVECTMVEKRVLALL DKPPFLTLQHSFCQTVDRLYFVMEYVNG GDILMYHIQQVGKPEQAVFYAAEISIG LFLHKGRIYRDLKLDTVMLADSEGHK IAIDFGDVQGN*WDGSHGPGTFCTPD YIAPEIIAYQPYKGSVDWWAYGVLLYE MLAGQPPDFGEDEDELFSIMEHNVSY KSLSKEAVSICKGLMTKHPAKRMGCGPE GERDVREHAFRRIDWEKLENREIQPPFK PKVCGKGAENFDKFFTRGQPVLTTPDQL VIANIDQSDFEFGFSVYNPQFVHFIQSAV |
| 1671 | 9722 | A | 2616 | 1 | 1136 | MTQISNIKOPFAMQHRFFISLHWTLQV YPALFLGLCERGRNGRCDVPEGSVLSL LVVVVPLGAFFVAPGTCGTSVYPDAG LHGPEVESKLGLDPSGMTGTQPTRTPAQ PAAAEPPALTGPGRVHQEQAVLACGFLG IYHLGAASALCRHGKLVKDVKAFA SAGSLVASVLLTAPEKIEECNQTYKFAE EIRRQSGFVTPGYDFMARLRSMEISILP PSAHELAQNRLHVSITNAKTRENHVLST FSSREDLIKVLASSFVPIYAGLKVVEYK GQKWVDGGLTNALPPLPVGRTVTISPFS GRLDISPQDKQLDLVYNIAQDIMLSL ANLVLRLNQLFPPSKRKMESLYQCGFD DTVKFLLENWFE |
| 1672 | 9723 | A | 2617 | 118 | 1018 | VTARPRASRLKGLVQHGSVPLGHCA RMKHINLSFAACGFLGIYHLGAASALCR HGKLVKDVKAFAAGASGLVASVLLT AP/EKKLEECNQFTYKFS/EIIRRSQSGA VTPGYDFMARLRSMEISILP/PSAHELA/ QNRLHVSITNAKTRENHVLSHIFFSSRED PQLRSLSPASFVPIYART*SLVEYK/GQ KWVDGGLTNALPHPCPVGRTVTISP/SG RLDISPQDKQLRSVCLISAKQDIMLSL ANLVLRLNQLFPPSKRKMESLYQCGFD DTVKFLLENWFGKICIVL |
| 1673 | 9724 | A | 2618 | 60 | 388 | GLDSFSAETRRTHNTNTEPHSQSQEPSNG EPQKEEPAAESRDPTPGQTEEDQDTAEI PVRDMEGDLQELASVKHRG*ILDG/SV KVKIIPKEEHCKMPEAGEEQPV |
| 1674 | 9725 | A | 2619 | 1 | 4123 | |
| 1675 | 9726 | A | 262 | 72 | 276 | AIQFSYVICVPGICISPDREKRDRGRKDG GRHRTWRQGE*KGEVGRERRRRGRER/ DRQRDRDIYSPD |
| 1676 | 9727 | A | 2620 | 71 | 547 | KQIPSLPISRPSVLAVMVTMLKVGAPP MLFIQRSVVNSPSCSSSRITVYFVWPPSV SPFMTKLDQSLPTRTPTISAGVMRLRVFP PISRREKPTCFSSNA*KELP*GWQESGCSR QCPLSSRETCRASCINPFSANARGEAVCV LGARVVFLFTSETGNS |
| 1677 | 9728 | A | 2621 | 241 | 452 | ENVMLCIIRAKENNHMITLSYTVKAFGK LKTFFMIYKNKPKQLTSMIRRENGTNP KGRFEKNS/AGNIILNIGLNAF/PIKSEKK VEYLLLFQFSIILEI*INAIK*EK*IKGRFE KNSEVTLY |

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| 1678 | 9729 | A | 2622 | 1014 | 1432 | SARLSLPKCWDYRREPPCPASFLYLKNIH LYIRAKEKNRMITLSYTVKAFGKIEFNFI MYNNKPKQKMLYMMRTEGNTSNPIKGR FEPTGNILNRHKGCFSEKSEKKVEYLL LIF*FSIILEL*VNAIK*EKLIKY |
| 1679 | 9730 | A | 2623 | 55 | 316 | NFWGGGAPKAPPPKKGFFPKPRGVNLNR PPQKEKCLFPPPVKLGPPKDFLKRAPP* TPKKFFFFPKPYKFLGGGGPKSPPPKKR VFSQNPFRGFKSPPPKRRKIIFFPRKJGPP QGFCKKGPPLFIFFCLFPAFMETTCPSFK SLSKKFTKTK |
| 1680 | 9731 | A | 2625 | 1 | 963 | PTRPNNFHSHPHTSPAAVGSALRCSGRR RSLEVATSLPHSPGPRPAADVKMSSSEE VSWISWFCGLRGNEFFCEVDIEDYHPGT NFNLTDNLNQVPVHYRTSSKP*SLDPEPD NEELADNPNQSDLNEQAAEMLLWDLIHA ARYIPLPTRRHRPRCLGKVPKSGDGFYCY VPRVYCENPANCFFIGLSDIPGEAHGESS YCPQ/CAMDV*HTPSQRQSPTRMGA*L RATGFPSHGSFMVAIPELPGPKRAQPSF VA/RGFLRGFKIHPMAYPAGSQGRPAT FKKPOFKTDSLIPSTCPAVFCLFLSFLPT LSGTLTYGF |
| 1681 | 9732 | B | 2626 | 44 | 403 | MKALILVGGYGTRLRPLTLSTPKPLVDF CNKPILLHQVEALAAAGVDHVLAVSYM SQVLEKEMKAQEORLGIRISMSEHEEPL GTAGPLALARDLSETADPPFVLNSDVC EFPFQAM* |
| 1682 | 9733 | A | 2627 | 159 | 309 | IGPSLALGSKVFLQKKQSLFIRCWLQIA LQDLWPQGWNTAEMGWA*QMG |
| 1683 | 9734 | A | 2628 | 545 | 2302 | AACAPSPRTESSTVSSLPILQECLLGAMK ALILVGGYGTRLRS/LTLSTPKPLVDFCN KPILLHQVEALAAAGVDHVLAVSYM SQVLEKEMKAQEORLGIRISMSEHEEPLGT AGPLALARDLSETADPPFVLNSDVCDF PFQAMVQFHRIHIGQEGSILVTKVEEPSK YGVVVCEADTGRHFRFVEKQPVFVSNKI NAGMYLSPAVLQRJLOQPTISIEKEVFPI MAKEGQLYAMELQGFWMIDIGQPKDFLT GMCLFLQSLRQKQPERLCSGPGIVGNVL VDPSARIGQNCISIGNVSLGPGVVVEDG VCIRRCTVLDRARISHSWQESIGSGGG SWKLLTIDQDLMVAQFSTPSLPFLTKVG FLPSAGKEQSVLWVSEEAEPDIHWGI RVLPQPPRARECAEVRMENVTVLGEDVI VNDELVLNGASVLPKHSIGESVPEPIIHI DGGFAEEAVLVHQQVLDVTGSTTGGM RTALHVPALTPTKLWGPLLADLWAQG WDTAEMGGGSCCLGRGCRQVRQDLFO LGQLIGTDIIRIWGVVGSVKSEVAEDVMP LEYSQPTTLFLRLTLRPSRPF |
| 1684 | 9735 | A | 2629 | 124 | 1315 | RARGRRRWECAAGTGOAGCRHLRAR DTPSTSAGAMKALILVGGYGLRLRPLTL STPKPLVDFCNKPILLHQVEALAAAGVD HVLAVSYMVSQVLEKEMKAQEORL*IRIS MSHEEPLGTVGPLPLARDLSETADPP FVLNSDVCDFPFQAMVQFHRIHIGQEGS ILVTKVEEPSKYGVVVCEADTGRHFRF EKPQVFSVSNKINAGMYLSPAVLQRJLOQ PTSIEKEDLPIMGKEGQLYAMELQGFWM DIGQPKDFLTGMCLFLQSLRQKQPERLC SGPGIVGNVLVDPSARIGQNCISIGNVSL GPGVVVEDGVCIRRCTVLDRARISHSW LSECVGWRCRVGVVWRMENVTVLGE DVHVNDELVLNGASVLPKHSIGESVPEP RIIM |
| 1685 | 9736 | A | 263 | 166 | 396 | PQIPPPPGIPKRENLSREPGG/FNPGWG* A*FPLEKFLGKKNLGPPPGGPTPPFP NPNLGGPKGGDQKAGKKP |

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| 1686 | 9737 | B | 2630 | 162 | 276 | MGRANESLNVLIVYHFLFQKGVCQRLL QLVQVVLQHLLX* |
| 1687 | 9738 | A | 2631 | 2 | 292 | |
| 1688 | 9739 | A | 2632 | 3 | 2111 | SSCOLGGQHGLGAARVRSLFKEARARA PCIVYIDEIDAAGKKRSTTMFGSNTEEE QTLNQLLVEMDVFYAKIEKLNVNRRAE TGVSLSRCSTQK*K*S*NCILITVIFYAAIE ELKLMYPYHGVLCSSRRKLSSCSNKEMT QSEKSA*YRMTPLGMGTDDHVIVLAST NRADILDGALMRPGRDRHVFDLPTLQ RKGVALSRLRCSAITTHCGLNLQSSS* GARTTMGVRRRAG*FLTESRCVAKAGV QAAISAHCNHHLPGEA/RKIFEQHLKSLK LTQSSSTFYSORLAELTPGFSGADIANICN EAALHAAREGHTSVHTLNFEYAVERV AGPHGFQLWESSGFLPEEWQLLCQTLQ NTPQFSPTALRGREDWRCLCTENLFSC NHLLLCGNKAFYNSKAGRTEWEPQA S*KKIHDLVLECSGPRADSSCTEWTLTDV WKI*DRK*SLRTAKKSKILSKKEEQKVVA FHESGHALEGWMLH/TEAVMKVSITPR TNAALGFGQ/MLPKDQHLFTQ/ESSFERR FIALGGRASEHFSLENTSGAQDDLRLK VTPIAYSMVKQVGMAPGIGPISFPEAQEG LMGIGRRPFNOGLQOMMDHEARLLVAI KAYRHTKVLQDNLDKLQALANALLEK EVINYEDIAIGPPPHGPKKMIAPQRWVS DAQEEKQDLGEEETEETQPPGLGGEPT WPK |
| 1689 | 9740 | A | 2633 | 2 | 2416 | FOANMAVLLLLLRALRRPGOPRPLW GPGPAWSPGFAPRCGRPYMASRPGD LAEAGGRALQSLQLRLTPTFINGNLLL KQHLVQNPVRLWQLLGGTFYFNTSRKK QKNKEKDKSKGKAPEDEEERRRRERD DQMYRERLTLVIAVVMSSLNAJSTS GGISWNDVFHEMLAKGEQVQVQVPE SDVVEVYLHPGAVVFGPRALMYRMQ VANIDKFEELRAAEDELNEAKDRIPVS YKRTGFFGNALYSVGMGTAVGLAILWYV FRLAGMTGREGFSANQLKMARFTIVD GKMGKGVSFKDVAQMHEAKLEVREFV DYLSKSPERFLQGAQVVKGALLGPPGC GKTLAKAVATEAQVPLAMAGPEPVE VIGGLGAARVRSLFKEARARAPCIVYIDE IDAVGKKRSTTMGSFNTEEEQTLNQLL VEMDGMGTDDHVIVLASTNRADILDGA LMRPGRDRHVFDLPTLQERREIFEQHL KSLKLTQSSSTFYSORLAELTPFSVADIA NICNEALHAAREGHTSVHTLNFEYAV ERVLAGTAKSKULSKKEEQKVVAFHES GHPLVGWMLEHTEAVMKVSITPRTNAA LFGAQMPLRQDHLFTKEQLFERMCMAL GGRASEALSFNENTSGAQDDLKRVTRIA YSMVKQFGMAPGIGPISFPEAQEGLMGI GRRPFQGLQOMMDHEARLLVAKAYR HTEKVLQDNLDKLQALANALLEKEVIN Y*/EDIAIGPPPHGPKKMIAPQRWVS DAQREKQYLGEEETEETQPPGLGGEPT WPK |
| 1690 | 9741 | A | 2636 | 350 | 1256 | LCLFPLPARKMATNFLAHEKNLVDKFK YDDAERRFYEQMGNPVAGC/ASRQENG ATVILRDIARARENIHKLASGSGPGASS GTSGDHIGELVVRASLEVENQSLRGVIV QELQQAISSEARLNVLEKTVFGHRAV GPQTOHVSFMRQVPEPPSPRSPPIAEG/ DARDDDIALFGSDNEEDKGGTSLRE/ E/RGFRFFGEEKRPFKPRVLAQSLFLG* NPWDR*KDMAQLEACVRSIQLGTGRS WGASKLGA*WATGIRKLIQOCVVEDDK |

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| | | | | | | VGTDLLEEEITKFEHVQSVDAIAFNKI |
| 1691 | 9742 | A | 2637 | 1 | 304 | GKTFDTCPLGPALVTKDSVADPHTLKI CCRNVNGKVVSQGNNTQMVFKTEDLIAW VSQADVILTGTPGVGVFRKPPVFLKKG EVQCEIEELGVIINKVV |
| 1692 | 9743 | A | 2638 | 1 | 927 | |
| 1693 | 9744 | A | 2639 | 3 | 847 | PSGSDFAAAVVRPLDAVTGASQAQAPAA LDLPPREP*LSAGGPVAAAAARALAAQ LPVLPRSEVTLFAPVTWPDKVVCVGMN YVDHCKEQNVVPKEPIHFSKASSIVGP YDEVVLPPQSQEVDEWEVLAVVIWKRK ASTSR*SGKGGLPVQSAEAPAPASPSD LTHQHTVPAVPDTRKQASALLPDTAFPP THLWLALATNMG*QLRDLPL*VLVSPMI *PPVWPNPLPP*ATDAMAHVAGFTVAH DVSARDWQMRNRNGKQWLL*KTDFDTCP LGPA |
| 1694 | 9745 | A | 264 | 3 | 413 | SSYRWPSFPILKTCRGPMAFSLSPFGSFLS GLSVPLPLHHPPCPT*LKAAYPNCQLWP FLASVAPDTAPPECPSCFLLQRAQA/PPF LLDLFPYDC*GLCCT*PHQPRGNPLTPRQ GLWLGLKTHCMGTAKAGPGR |
| 1695 | 9746 | A | 2640 | 2 | 562 | ITPRFHLCSIDPHNLKICCRVNGVEVVQSS NTNQMVFKTEDLIAWVSQ*VTRAVLSAP LHLPHMWRLT*ALHLWLWPLSQPLVSL GPFALLQ/FVTFYPGDVILTGTPGVGVF RKPPVFPQGRFSEKQREQGPPKPLAGLPS DLRSTGLCMCV*RKGLTLSWPAALLQKG DEVQCEIEELGVIINKVV |
| 1696 | 9747 | A | 2641 | 867 | 1476 | LVPVLRRLPLTSRPASPNQAEDRLPPA RROEVNWEGLAGVIGKKGPIKATDA MAHVGGFTVAHDVSARDWQMRNRNGK QWLLGKTFTDTCPLGPALCDQVTGVAD PHNLKICCRVNGEMVPERQTPNQMVIS RQRT*IALGLPSLVTLLPPGDVIFNLGPPH LHPGVGVFRKPPVFLKKGDEVQCEIEEL GVIINKVV |
| 1697 | 9748 | A | 265 | 646 | 1333 | EPGMWQSPSPSGCPHRTGQAQSA/SPPS TGLS*IPAFPGWRPA/WHILHPLTSPCTC* L*SLGVFPVPPQFVSTPSQDLNDIFPV PPSYRWPSFPILKTCRGPMAFSLSPFGSFL SGLSVPLPLHHPPCPT*LKAAYPNCQLW PSSASVAPDTAPPECPLLFCFRGPGSPILL TSPICLRLTLQLSSPASGESHYPGRAV GWAEPSPSAWSTRSLALGPPMNNEN |
| 1698 | 9749 | A | 2651 | 28 | 352 | VRVWVGNAGCRLCFRADGVASGVGCA WDGDRMCLPESFIRAPVLSVSTAGPQSS QSSGRSATPGEGAQGNRLTLPSPALPSP PMAPPSYLVGTSPAHHSDDCWP |
| 1699 | 9750 | A | 2652 | 1198 | 1889 | LKLPFRDLKVCQGWVLEENRLTKMLLS TSVLSCFSSRPNMSEVSNKRYDYLEWP EYFMAVAFLSAQRSKDPYSQVGACIVNS ENKIVGIGYNGKPNGVHNSLP*RRTPK NKLDTKYYPVCHAEALNAULNKKFRPDV KRPEVCMFALVPPGK*NGGLSLII/LQAGI KRKLIFHVLINYPG*LTGATAARLLF*YG PGVTPRKFPKCKSIVDFDSINRSPSRKL Q |

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| 1700 | 9751 | A | 2655 | 1099 | 1712 | CALGEGNSGHRAFSKDRARLRPGWWSG RAKDELGKPKPLGPS*RRADRR*GQSAC DSSPPSGPGPTGDGARGRC*AARPGPRA RRRLRPGSGEDRSQMGTEEGHHGRLW GLSVGPAPKPESAPSSLTCTREETPGRGR PPAPQFQSLARSHGIRGAGDKPTEEKSL PQQRHRGGASSVGRGPLGFFPLEEAPLP YPWPFPNLQ |
| 1701 | 9752 | A | 2656 | 1 | 900 | |
| 1702 | 9753 | A | 2657 | 465 | 1269 | TSSSCSCHPPPNACCRGTSSVLSQKAGQ APHLPGPTGKPLRSSGSLRAVRAPGPIGG GQAPWSDPVLQAPPRFPQAPRGSWRG AGPRQPGRDAAPRMLLPQPRYRTLQFQ RLMLPKKNIRIAIYELLFKIEGVMPVKUD VPIPKHPELADKKNAPNLRVMKPMQVSQ GRGGYVKGQFAWRHFYWWLTK*GSK CQLHTEAARLQGP/DIPT*RTAL*PATG HLSMRARSLEVQRPTAAPSGPSWLSLLQ KGMWTKGNEDLHFRRCR |
| 1703 | 9754 | A | 2658 | 1 | 433 | |
| 1704 | 9755 | B | 2659 | 140 | 480 | MVFEFLYKMCVMAAYFGKISEENIKN NFVLIYELLDEILDGFGYPQNSSETGALKTFI TQQGIKSHQHTKEEQSQTQVVTGQIGW RREGIKYRRNELFLDVLEKNVLLMSPQG S* |
| 1705 | 9756 | A | 266 | 268 | 926 | ASCTPFTPLPVRGRLGYNPDSPTGNSAH WAGDNEMSLVGLGPPVTKYPHGHALPQG WGSWWVRGLSRTPAVTLSQLGSCSVLE TCWGPEGAWFLSPQSVMDLESRPSRA DPQDGLGVYGLASSWTVNQPTWTSR IGSACQA/RSEFNKSHLFIPEGET*GPOK GGGVPPKPHYKAPMQSPGPIWTOPRAP PTGAIYFFLQMGPPWRFSLEFGVGG |
| 1706 | 9757 | A | 2660 | 100 | 1674 | SAAMIGGLFIYVNHKGEVLISRYVRDDIGR NAVDAFRVNVIIHARQOVRSPVTNARTS FFHVKRANIWLAAVTKQNVNAAMVFEF LYKMSDEMAAYFGKISEENIKNFIYVH YMEILLDEILEFQYPOEFDD/SGALKITFITP AQHSRSSGFRQKESSQTSQVTTGQIGW RREGIKYRRNELFLDVLESVLLMSPQG QVLSAHVSGPVWVMKNYLSGMPCEKF GMNDKIVIEKQCKGTADETKQEPGSNQL LIDDCFTFHTQCVRLSKFDSRSFIPPD GEFELMKYRTIKDILPFRVPLVREVGR TKLEVKVYIKSNFKPSLLQKQIEVRQP LNTSGVQVICMKGKAKYKAGENSFVW KIKRMAGMKESQIQRRGFELLTNDKK KWGCIRTPFPNMFEVFPAPSGLKVGYL KVVLNPKLNSDHDVHKWVR*IGRSIGY ENSACKATRLQALQPPFLQQVQVPLL PQTTHQVSPSLPALLPSPLHQRSLRSGP KQHYKVGPFEPALGLPQGGEF |
| 1707 | 9758 | A | 2661 | 1 | 356 | |
| 1708 | 9759 | A | 2662 | 303 | 774 | DPKSCGRWRRGRNGELADLQAESH ARAAGRGLPGALARVQPEAAAAEYGAR CORGAAENSIDFVSRELCAHSIRKLQAH VLLIKAVHGYFDPRENYSKESLSFMDIT MKSTLKERFQFVEVPGNHCVHMSEPQH VASIISFLQCTHTLPAQL |
| 1709 | 9760 | A | 2663 | 572 | 902 | GALARA*PPQQRWVSCPR/GVP/GAL*RE FTMFLSLQAENSIDFVSRELCAHSIRKLQA HVLLIK*VAQAGAQRSQLTGYGSLTWA CPPLTTVKSHGTAPPHLLHSPSTSDLPP SMILLPGGLPKKDLES |
| 1710 | 9761 | A | 2664 | 1 | 398 | PNPLSTQMGTSGGKGHQLLEYSFGGGP PPGPRKQFHCSPPPNPASGKKGH/SPPL /SPHSFSKVKFNQAPPPPTPTPKQERKS* LKMLFNFSAPVDPTPAQMAPPGLFVPSP SPPLHRLPPQAWGQRHSQQ |

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| 1711 | 9762 | A | 2665 | 119 | 496 | TGAVSFQMPEETQTQDQPMEEEEEVETFA FQAEIAQLMSLINTFYYSNKEIFRELISNS SD/GEPMGRGTVILHLKEDQTEYLEERR JKEIVKXHSQFIGYPITLFVEKERDKEVSD DEABEEKEDN |
| 1712 | 9763 | A | 2666 | 1 | 235 | |
| 1713 | 9764 | A | 2667 | 1 | 2424 | RKVVREASGKSAAARWAGPSLYKAGAGV ARQLLRQPGVAVPLVLCGHLAKMPEET QTQDQPMEEEEEVETFAFQAEIAQWISLII NTF*LETKRSLFRELISNSDALDKIPVLN A*HDPHSIRPLGKELHITLLPDQTKIRTL TIVDTWNLE*PKADLNNLGTIA/RS/LGT KAFMEALQAGADISMIGQFGVGFYPA/ YLVAEKVTVTIKHNDDEQYAWESSAGG ISFTVRTDTG*TYGSVGTKVILHLKEDQT EYLEERRIKEIVKXHSQFIGYPITLFVEKE RVDKEVTDDAPQEKEDKEEKEKEEKE EDKPEIEDVGSDEEEKKDGDGKKKKKI KEKYIDQEELNKT/KPIWTRNPDOLTNE EYGEFYKSLTNDWEDHLAVK/HFFQFEG QLEFRALLFVPPVTL/PFDL/FENKKKKN NIKLYVRRVFMNDNCEELIPEYLNFRJG VGDSEDLPLNISREMLQOKPKF*KFSRK NFGPKKCLELFTELAEADKENYKFFVEQ FSKNIKLGHEEDSQNRKLSSELLRYYS/ ASGDEMVS/LKDCPR/MKENQKHYYIT GETKDQVANS/AFVRLRK/HGLEVIYMI PIDEYCVPLK/KEFEKGLTVSV/TKGLE LPDEEEKKKQEEKKTKFENLCKIMKDI K/EEKVEKVVVSNRLVTS/PCCVITSTYG WTANMERIMKAQALRDNSTMGYMAAK K/HLEINPDHSIIEPLGPKA/EADKNDKSV EGILVIW/KETAPFS/AFSL/ENPRTHAT RNIYRMIK/PLG/NDDEDDTADDYQWLLV TEENPPL/EGDDDTSRMEEVD |
| 1714 | 9765 | A | 2668 | 524 | 797 | AVSPSEGEQERGEKRA/GACGSR*SQHF VRPRWADHLRS/GV*DOQGHGETPVT KNTKISWAWW*ASVIPATREAEAGEWL EPRRRRIQ |
| 1715 | 9766 | C | 2669 | 102 | 323 | |
| 1716 | 9767 | A | 267 | 599 | 1420 | SHLPSLSLLPRIPPEVIVGSRGPFVVPFPCP WGSCWGLSRTPAVT/LSQGLCSVLETC WGPGEAGWFLSPQVMCDLSPRSPADP /RGWKFRVYGLASSQOMCNHLEYSRML VLARHSELISPTYSFGEGETEAQRG*GIP KPHRSNAEPGPYTGHTWPLHTGTTF SSQMRG/PSGLLDSGQWIKTEGDKEKAPG LMGLKDRDGTGTCYGC/CSKCPGQ/LQA GGVLYLAQPPALIRLPNGRPAARERR DWHHREETGFL/DEATLLKARP |
| 1717 | 9768 | A | 2670 | 146 | 804 | TETRFSDSVAQAGPGT/PLLLLLALPR/L TFSPLLSPTVGTKCGN/PLWAPKPCPALA AFSGCRM/WKEQGRKM/GVNC/PRPVAA CMCV*TKRFPSPMFLPSRFSSETRRAA RGSSSEL/PWVAGAWSASSDSPLPRSTAP RRSVCTHCGLTQPTRHACQKAGAGVCVR GPRSEAKGWRGRALLLLAATPCPLSCP NLGLPAKVTPEQGLVRRGRGPAG |
| 1718 | 9769 | A | 2671 | 1 | 787 | LNSRVEPRVRSRKTMETKPVITCLLTLIIY SFVFWITGAILLAVGVWGKLTGLTYISLI AENSTNAPYVLIGTGTITV/VFGLGCFAT CRGSPWMLKLYAM/PLSLVFLAELVAGIS GVVLRHEIKDFTLRTYTDAMQTYNGND EUSRAVDHVQ/RSLE/SCCGVQD/YTNW STSPYLEHIG/PPSCCMNEVDCNPQDLH NLTVAAK/VNQKGCYDLV*FSWEIN MGIIAGSGRLGR/AFSOLIGHAGWACV/L SRFHIGPIQY |

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| 1719 | 9770 | A | 2672 | 1 | 670 | YKVLIFT/SPCSVDOLCSALCSCFRPKDT ER/LRG/APEGFSRTDLHLAAVVPVLTALI SYINYLDKTKQREMYVYREQLHRCPI RQCVVALSICSVEMPDIIKALPVLVVKL THIASATSMAPLLEFLSLARLPHLYRN FAAEQYASVFAISLPYTNPSKFNQYIVCL AHHVIAKPLHRLQPSPHLAMRWASGSAS SPRWRTSPSLCEAGALPPALALDGIACQ |
| 1720 | 9771 | A | 2673 | 1 | 154 | |
| 1721 | 9772 | A | 2674 | 237 | 410 | |
| 1722 | 9773 | A | 2675 | 1 | 414 | |
| 1723 | 9774 | A | 2676 | 1 | 6371 | MPDSCGLHIPAAHAAPSRDARIAGLSAR GRHRTITPSKLPRRPSAQCRYKCGSRF RRRPGARGVRLSPRRGPERGGAAREGF SGASWSTMAKPTSKDSGLKEKFILLGL GTPRPNPSAEGKQTEFIITAEILRELSME CGLNNRIRMIGQICEVAKTKFEEHAVE ALWKAVADLLQPERPLEARHVALLLK AIVQGGGERLGVRLALFFKVIKDYPSE DLHERLEVFKALTDNGRHITYLEELAD FV |
| 1724 | 9775 | A | 2677 | 1 | 5405 | MAKPTSKDSGLKEKFILLGLGTPRPNP RSAEGKQTEFIITAEILRELSMECGLNNRI RMIGQICEVAKTKFEEHAVEALWKAV ADLLQPERTLEARHVALLLKAIIVQGG ERLGVRLALFFKVIQGDYPSEDLHER LEVFKALTDNGRHITYLEELADFLVQW MDVGLSSEFLVLVNLVKFNKLVTLDE VQSQRNGFKMICLVCVRTASSVDIEVS LARLLDAVGLANNCPLAESLPLFIV |
| 1725 | 9776 | A | 2678 | 1 | 5469 | GASWSTMAKPTSKDSGLKEKFILLGLG TPRPNPSAEGKQTEFIITAEILRELSMEC GLNNRIRMIGQICEVAKTKFEEHAVEA LWKAVADLLQPERTLEARHVALLLKAI VQGGGERLGVRLALFFKVIKDYPSEDL HERLEVFKALTDNGRHITYLEELADFLV LQWMDVGLSSEFLVLVNLVKFNSCYL DEYIARMVQMICLVCVRTASSVDIEVSL QVLDAVVCYNCLPAESLPLFIVTLCRTIN V |
| 1726 | 9777 | A | 2679 | 35 | 239 | SPSSQPPVPVPIH*PVCCKOPTSCRSRPRKV LNLVGGGEGAASY |
| 1727 | 9778 | A | 268 | 1755 | 2524 | VPWGNPGSESVGLPGGRGLVTAPAVFLP PKPAPGFGAQHYRVRK/PSRRGQLIRAA WLTGSPVRPGQEMLGAGRGGASGRAG* GPAPYRKLSSASARGAGHPESGNCSSSG SGSTWSSSWGSGSSWSGRGLSQEMV EEVL/HFIQGGAG*AGGTQWALVSNLG FGVROGDDIVVVTILGLHGSIEDGAGVQ GRSEAMEPRQAG/RTGEGWLGGHSSETP HPPAGTSFCNLRPTVSREAAPARRGAE SQTSLPSTA |
| 1728 | 9779 | A | 2680 | 118 | 359 | AVCKOPTSCRSPPCCSPGQCASPC*AFRR LEI/CRAGF*A*ALGPKSGQGNCPRSSPP PSP/CPLLYGQNCG*KCPQRLH |
| 1729 | 9780 | A | 2681 | 229 | 455 | TMQGSLNKPLPSP*PRAATKIPNP/SPSP POPAPQTTPHSILSTKAMTPVTIQALFSRI VRYLCDCCRDSLTSQSF |
| 1730 | 9781 | A | 2682 | 1 | 373 | |

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| 1731 | 9782 | A | 2683 | 72 | 1031 | GCPRLLILLRGRSGLEPGTRFKMAAARPSL GRVLPDSSVILFCDMQEKFPHNIAVFPQ IVSVGSRMLKVARLLEVPVMI TEQVFPQ GLQPTVPEAGD*GPSAAWQKTCFSM/CC LPLQQLDSRPQLRSVLLCGIEAQACILD PRSYPGLALITSLYPQNTTWDLDRGLQ VHVVDACSSRSQVDRLVALARMRQSG AFLTSEGLILKLVGDAVHP*QFKEIQKLI KEPAPDSGLLGLFQGGNSLPLNSNPAIR EDHPFVHPGPQWEARFPGLGPRVGAIP PGSCRPLVGGGGWCCLPIGQLPEMQM RLLETGWEMG |
| 1732 | 9783 | B | 2684 | 1 | 792 | MGVLPSPYFWDDEAEAEQEGICLSLKQRM PVGRAGHSGHFLADATSRLARRREEW GKQEERG VKESSESTNTISRMKTPKEDV RPGMTAFEPEALGNLVEGRIDSILKTV SNSFSLGACLLSFHVLLDGTAGRGSDR DEQNAHSVYPEQQAHHHPESHIIHL GDESACIAYIRTRSTWTLAASHAPPSRRD PCLAPPGWQADRPRLHRS GAPSVLPHSQ DTDTEMNQERYMNASISFPKPHSTSQ VLFIQPGEREI* |
| 1733 | 9784 | C | 2685 | 10 | 126 | |
| 1734 | 9785 | A | 2686 | 2 | 370 | HCIIQI LEAVLHCHQ/MGVVHRDLKVPGE KKNQTLGRAVLLSFT*RRQLSGLGHQLH SLAPSAGTSWISLLIMVSVAGFAGT/PG YLSPEVLRKDPYGGK/PVDLWACGG*RF GPLPGVILYILLV |
| 1735 | 9786 | A | 2687 | 1 | 1593 | |
| 1736 | 9787 | A | 2688 | 3 | 1607 | IPGSTISCSSVKPVLCLHSAARACKWSLG SGAEQRLSPGPPVPSLTCULSPAMATT CTRFTTEYQLFEELGKGAFSVVRRCKV LAGOEYAAKIINTKLSARDHQLKLEA RUCRLKHPNIVRLHDSISEEGHHYLFID LVTGGELVEDIVAREYYSEADASHCQIH LEAVLHCHQMGVVRDLKPENLLASK LKGA AVKLADFLGAEVEGEQQACVGF AGTPGYLSPVLRKDPYGGK/PVDLWACG VILYILLVGYPPFWDDEQHRLYQKIKAG AYDFSPWDVTVPKADLKNMLTNP KRITAAEALKHPWISHRSTVASCMIHQE ARGPA*KKFNARRKVLKGAISTWMLAT RNFSGGKSGGNKSDGVKESSEANTTI EDEATKVRNQEIIKVTQELIAISNGDPES YTKMCDPGMTAFEPEALGNLVEGLDFH RFYFENLWYRNSKPVHTITLPHIHLMG DESACIAYIRITQYLDAGGIPRTAQSEET RVWHRRDGGKWOIHFHRS GAPSVLPH |
| 1737 | 9788 | C | 2689 | 6 | 167 | MXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXX KH* |
| 1738 | 9789 | A | 269 | 3 | 389 | GVSPCWPGWST*TPDLK*STRLGPRCWD YRLLEVDPCTGHSYL*KDPPVLPPLAEG CDYQKKEYALSSCDKSYLLDYRTKFL CCHPERGTWKLGTGGCYAFIQSGFIAD EQAWLQHSGSAVYLC |
| 1739 | 9790 | A | 2690 | 310 | 593 | LQVISEYLFWRINFFLFL*TVLSVAQA RVQWRDPGSLQPLPGKFLASASRV ARVTGAHHHLHAQLILYF*YETGFHHVG QAGLELLTSGK |
| 1740 | 9791 | A | 2691 | 58 | 481 | LQVISEYLFWRINFFLFL*TVLSVAQA RVQWRDPGSLQPLPGGSRDS*ASASRVA RVGTGAHHHLHAQLFCIFK*RGQFHGPWSG WSSNLDLQANPAASALPKVPGITGTSP HPPWSINFKNIKIWNQETSILVFFRL |
| 1741 | 9792 | A | 2692 | 1 | 398 | |

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| 1742 | 9793 | A | 2693 | 3 | 267 | AMVGGGGVGGGLENANPLYQRSGER PVTAGEEDEQV PDSIDAREIFDLIRS*AW PLTPQPAYWYPGSSCQGCYRCFLES LRN |
| 1743 | 9794 | A | 2694 | 1 | 942 | |
| 1744 | 9795 | A | 2695 | 3 | 707 | AMVGGGGVGGGLENANPLYQRSGER PVTAGEEDEQV PDSIDAREIFDIRRCWAR AGSGGLRWGEQ*YRAAGGAASQQGV GRGF*VGKGAESLFLHPPQMLRFLNDP HSLTLEELNVVEQVRVQSDPESTVAVA FTPTPHCSMATLIGLSIKVLLRSLPQRF KMDVHITPGTHASEHAGKGLVVRVLA RAPPKQSEASPLHRSWARLEMGCNVCSE IARDSSVWVIA |
| 1745 | 9796 | A | 2696 | 2 | 604 | ARSHRISGGGSAMVGGGGVGGGLEN NPLYQRFGERFVTAGEEDEQV PDSIDA REVFDLIRSHQMTPEHPALTEELNVVE QVRVQVSDPESTAVGFPKPTHS HGPPLIGLSAIVKLLRSLPSAFSRWDVA HLLPGDPLPQEHAVEQATLQKEAGWAT ALGRTPHLLLEVNVNQLSSPAPGTWAFV PLSLA |
| 1746 | 9797 | A | 2697 | 79 | 690 | KVSKAIAAGCLRN YGVCLAHRLTWA PEPKMNPVVEPLSWMGLTWSLDP PAGVYPTLQPFVLAEEVHISHVGQAM LNFNSFHDPTRKSMHRECGHFASKPD TNKVGLCQAPONTGLGWNWKEGEVK RARS LCIRIPLPFARISFRQGP HVEQIT/RGKFR LNSEGL*ADGSP MGNPRHSPMTQHH HDTYQEGEHR KPK |
| 1747 | 9798 | A | 2698 | 1 | 405 | |
| 1748 | 9799 | A | 2699 | 1 | 1437 | |
| 1749 | 9800 | A | 27 | 244 | 309 | NPKGQKDREAPLSRVFVLKIKIRAFAL LLHGRF*PSTPAASASPASKSRGSGKAL ASALFYIVOLTK |
| 1750 | 9801 | A | 270 | 555 | 1181 | RGPMPKQMTAVHCQGHQRGDSEIRN FRCHGPNSCTRWGSPPHASFSSTCL*N KPKYFPWGISFLSFLSRSL/DSVAQAR VQWCNLSGLQPLPPRF*QFCIRLLSS*D YRCMPPCPA/NYL*F**RQGTI*ARLVLN S*PRDPVPLASQSAGITGVSHQARTFLF FETTFHSVAHAGVQWHDLSLPPPPRF KRLSCLSLSS |
| 1751 | 9802 | A | 2700 | 78 | 399 | FIHRPDSGPPAERSPCRGVCSIGKKHS YPSCWYPLPKHTASCPISTILPL/LDL RIPLMWKDTEYFKNKGDHRWAVFLLL QLGEHQDTEMIHVDRLTYCI |
| 1752 | 9803 | A | 2701 | 2 | 368 | VVAGALGCSWL GIGAGFLSGREGACRR ERGOQQTGTPLPSSLPLPSSLEKRA GRTA ATKARLDTLCLEPLQLAFPPG DPTYPTSLFSSSLPLPA/WPPEQQW GEENLSQQPEGV*QELQRDKGSFCPL KSWPPL*RGGARLQLARNRGWFPV WKGRLQKGGAGTAADRHTPAFLSP SPFSGKASWENSCHQSETGHSVP RAPSAAGLSSWGPHLSSRLFLFL PCLGSQAFGAAVGRGKFVTAARG GLTGVAEG |
| 1753 | 9804 | A | 2702 | 1 | 588 | VRAGELDQALGRPFILSISNQYGDDEV THTLQTESREALQSWMEALWQLF FDMSKREGGWVEPLGRTVGCHFY* RPLQDQYVEGNVAGERAAWLSLL SIALPGQWKQCDEIMKIETAP RKPQALAKQGSLYHEMAIEPLD DIAAETDILTQREGARLET PPPWLAMFTDQPALNPSPASVAPAD WTHPL |

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| 1754 | 9805 | A | 2703 | 46 | 1825 | AAAGSETGLGSCLECKGPAEGSGDSSRQ AHPCLPLSSLLWKSEDTLQRLDHEI RLRKGPCKLLANLLPSEKQALEATKSL LVGNRILSYMGEUQQRKEAQLLGKT SRKPSDGGPAERSPCRGRVCISDLRIPL MWKDEYFKNGKDLHRWAVFLLQL GHEIQDTEMLVDRTLTDISFQSNVLF AEAGPDF*TCGLELYGACVEEGALTGG PKRLATKLSSSLGRSGRRVRASLSAG GSR/GAIPFMLPTPEVGGPRYHLAHTTL TLAAVQDGRTHDLTLASHEENPAWLP YGSVCCRLLAAQPLCMQTQPTASGTLRVQ QAGEMQNWAQVHGVKGTNLFCYRQP EDADTGEPEPLTIAVNKVMGPLEVETRVR AGELDQALGRPFTLSISNOYGDDEVHTHT LQTESRGSTCRAWMEALWQLFFDMSQ WKQCCDEIMKIETPAVRKPPQALAKQG SLVHEM/ALFEPLDDIAAVTDILTQREG ARLETPPW/LAMFTDQALPNCPSASV APAPDWTHTPLPWGRPTFSLD/VPPDHA SPRASLR/APLPTFSESPTRGLLQAKGQ PRTWLQSPV |
| 1755 | 9806 | A | 2704 | 1 | 370 | |
| 1756 | 9807 | A | 2705 | 1 | 363 | |
| 1757 | 9808 | A | 2706 | 158 | 301 | IIMTLAEDLLCSAAQNSRLSAQRTQAGW LLISALMTLGNL*KVYIP |
| 1758 | 9809 | A | 2707 | 182 | 395 | |
| 1759 | 9810 | A | 2708 | 1 | 434 | SSYPFSFIQQLFPTHFTL*HPVSWKNC RK*TRENK/TAELHFQEGKVLTELTVT VAEEHRAQLVACLPLILSLLDENS LG SATSIMRNLHDFALQNLMOIGPQYSSVF KSLVASSPALKARLEAAIKGNQESVKVK I |
| 1760 | 9811 | A | 2709 | 112 | 501 | |
| 1761 | 9812 | A | 271 | 80 | 599 | SIQEKRLSGGEQSPFTLKLQEGTSWLLM AKLYEAVTFKDVAVIFTEELGLLDPAQ RKLYRDVMLENFRNLL/SQWGINHAMEI LSTS*GKEKLWVMGTSSQ*ERNLGKIQ TEMETVPEAGTHEEFSCKQIWEQIASDL TRSQDITISNSQLFEQDDNPSQIKARLST VHTR |
| 1762 | 9813 | A | 2710 | 1298 | 8400 | FPINTTFPLLKVCYRFHYAEPAVPGHCR AGVRRREGADWGTGSADKQRGPFLLDY GKVVWLPQAQNDVREKQKTLVEQLLSL LNSSPGPPTRKLLAKNLAILEYIGDITFSV HEAIDKCNDLIRSKDDPSYLPKLA V VCLGSLYKLLGRILGNFTDTVTGNILKA MKSAESQGRYEIMLSLQNLNGLGAAAA PCHRDVYKAARSCLTDRSMAVRCAAAK CLLELQNEAIFMWSTDLDSVATLCFKSF EGSN |
| 1763 | 9814 | A | 2711 | 2107 | 2424 | TTRYLKKTSITGQRKKRGRNGSFPPTEN LVPSGIVTGSQQLGPPFR*HTEECWGP PTADGRAGKGPRQOPGRAQRIYRWDP SGTITWHHRPCGSRGTDOPEIK |
| 1764 | 9815 | A | 2712 | 1 | 368 | FRREGRPAGAGFADSGGAPSSCCGPT VRPVAATAENVLHVRGAFQEPVQAG VQWRNHGSLRPPPGSSIPPIAS*VVET TGMCHHVWLP**NFFVETGSPYVAQAL ILLMLGIKTL |
| 1765 | 9816 | A | 2713 | 1 | 278 | |
| 1766 | 9817 | A | 2714 | 188 | 406 | |

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| 1767 | 9818 | A | 2715 | 123 | 914 | PRAGGCGGSGRVTACLACATLVWPPR FQEVLLVLSGLVHARGCTYSQVLSRSH FCCSRGPLAMAGILFEDFDVEGY*PEGQ EVWTECSRHLHCESSEFRMDLILDVNIQY PVDLDGDKFRLVIASLTLYEDGTLDDGEYN PTDDRPSRADQFEYVMYGVYRLEGDAE TSTEAATRLASAYVSYGGLAMRLQGDAL NNLHGFEVGLPRVYLLMKKLSLNLAL NQPSLPSSHGRGHCSLSGQPLFAHLLRK GWLTVHRWRHL |
| 1768 | 9819 | A | 2716 | 1 | 2415 | |
| 1769 | 9820 | A | 2717 | 2 | 964 | |
| 1770 | 9821 | A | 2718 | 276 | 482 | |
| 1771 | 9822 | A | 2719 | 329 | 3354 | PVRQFIFPKLPIRHCLEAEVGGRGQTCAP PRKWAVPIGLHSRSATSSQSCGGGRSWL CSSLKMAAPPGRGIRLSALCPKFLHTNST SHTWGHSVOLLELIG*CLWIPDVNAKOI WGLTKQWNHHCITFTDNGNGMTSDK LHKMLSFGFSKDVMTNGHVPVGLYNGG FKSGSMRLGKDAIVFTKNGESMSVGLL SQTYLAEVIKAEHVVPVIVAKHROMIN LAESKASLAAILHSLFSTEQKLAELDA |
| 1772 | 9823 | A | 272 | 1321 | 1913 | VEMRRNQCKNSNSNGLCVICFSPNNHTS SPTRVLVTWMNCELHKYV*TWIGKII *TOENGKTOSEENKNNIKVQLKDKVA GIHKNNLTDLNAPKNTLLEFHNFTSINS RK/DKSDERISELEDVVSNIWTKVYN*NE QILHGGWDDIMRFLQTTGISEREVEKSN NLENVVODIIFESFNLARKANSQIOE |
| 1773 | 9824 | A | 2720 | 1135 | 1476 | HGVSLLLPRLECTGH/VISAHCDPRLPGF ERFSCSLPSSWDYRHPATHAQAKPCI FKWRRQFSHYGQAG*HFYFPSQVLGTN MEDDFLTGLLHGLFQEDSNAPYSFKWG SLR |
| 1774 | 9825 | A | 2721 | 670 | 1253 | ACYALNI.FPKHKTIFYFFFIYFFCRDRGP RYITQAGLKFDVK*ILPWPYQSVGIISV SHPPGPH*CLNAINKNYRYRN*LLY/IQ YPMLFGVFLRQGFVTSAAVQWYDYG SMQPQLPGLRWFSHL.SLSGWEHRRTP RLG*FCIFRESFVMLPRLVLNSWGSNDT PALASQSVVITGMSHAPAFPMFL |
| 1775 | 9826 | C | 2725 | 95 | 310 | MREYNLVVLGSGGVGKSALTVOFVQGI FVEKYDPTIEDSYRKQVEVDQCCMLEI LDTAGTSLPRLTTYRT* |
| 1776 | 9827 | A | 2726 | 1 | 1101 | |
| 1777 | 9828 | A | 2727 | 53 | 772 | IPRSGITGSEGDYPVYKSMCLTAPSMALS RSSVFKQITSREYKLVVLGS*GVGKSAL TVQFVHGIFVEKYDPSIEDSYRKQVEVD CQOCMLEILADTAGTEQFTAMRDLYMKN GQGFALSIFYLQSTFNGLYRDLEGNQ ILRV*GTRV/VMPFMLVGNKCDLEDERV VGKEQQNLARQWCTLALLESA/RRE IQVNEVLAYDPVRQINREY/TPVEKKP*K NSMSTLLGPVRRLO |
| 1778 | 9829 | A | 2728 | 377 | 615 | VPAQCS*DTASCLVVKRMRLDAVAH AYNPSTLGGRGW/IRGQEFKTSANM VKPVSITKNKISRVVWHNRNPSYSGG |

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| 1779 | 9830 | B | 2729 | I | 1224 | MPTVGKAQARRRTRDITLLDITQVLIDQ SPRKDTGLAQQTGVIVPSKGVKYWRAQ LKGDIMKYASPAELFYFSVRAQSDTGIV TLLDPTTREDDCDISSAPNPEVTRQRAQEV AGVGLLAVKVPREDEGLVGGAPGPQKR SRVCGEPTLQRRSGPLPVARPGSRCPPT SVSSPVPEDEYGRTVVMIRLDNPGISGR IENNPPPELEKQLPGEPSENSPYLGPPQVLF LLRDPREDVMLLNQPTTAEEKQAVLQ AAEIFRNEQQISYNTSKGKGDREREIEIA ETPFQIGSEAVPLDNDPNSSSSAGEWK RRHFLICILEGLERTKAKFLNCSKLSMVD QKPDENPAAFMERLREALIEQTSLSPSVS EKQLILKDKFVTQASNIRRLKQKQAIQ ISTLKNLLK* |
| 1780 | 9831 | A | 273 | 193 | 310 | |
| 1781 | 9832 | A | 2730 | 877 | 1536 | 1NFFALSPSCLAGLLPPKFQFSCLSLLS SWDYRNFYIFW*RWGFTMLARLVNS*P Q/CDPHTSASHSAGITGMSHCAWS*TLNF FSYELFFSFTSALS*KDHCKGGHNMGCQ FT*MQH*L*EKPP*LLFETESRVA/QAG VQWRNLGSLQPPSPGFKRFSCLSLPSW DYLRTPRPANCCCFSRDGVSPCWPGW SQSLDLVICPPWPPKVLGLQA |
| 1782 | 9833 | A | 2731 | 3 | 643 | RLEEDLGRRQSLAPVGVRYVETVYTVVL WITTMIGQGGSVLFGALLVLAVLCHS/ GH*PCQC/YNGFLPQTADCKQPFNCSS GFWMRVFITQKLGQVYNKC/WKFEHC NFNDRHNPA*RKMGTLTILCKG/LRCN FTEWLENGGTSLEKTVLLGELHFWA AAWEPSPKSNTRCFLTKLPSLRSSVF PLGWPHSKGLDIFQMGSWLGKE |
| 1783 | 9834 | A | 2732 | 11 | 431 | RHLAAPPAPAAAAAALSHCLRSSG RLAPHTSRRLPRVVKRRVNALKNLQVK CAQIEAKFYEEVHDLERKYAVLYQPLFD KRFEINAIYEPTEECEWKPDDEDEISEE LKEKAKIVDEKKDEKEDPKGIPFW |
| 1784 | 9835 | C | 2733 | 257 | 358 | MILLVFLPXHQVFLERXQSEIHLHLNTL ADVL* |
| 1785 | 9836 | A | 2734 | 2 | 387 | |
| 1786 | 9837 | A | 2735 | 64 | 467 | PAAWLPILVAARQLTVQMNPQILAA LQERLDGLVETPTGYIESLPRVVKRRVN ALKNLQVKCAQIEAKFYEEVHDLQRKY AVLYQPLFDKRFEINAIYEPTEECEWK PDEDEISEELKEKAKIEDEKKD |
| 1787 | 9838 | A | 2736 | 1 | 795 | |
| 1788 | 9839 | A | 2737 | 1 | 982 | |
| 1789 | 9840 | A | 2738 | 2 | 138 | SARGAASCSSRCCRCRPESLPAQLRAA WLPILVADIWSSYNMADINKEQSELQD DLDDVEVEEETGEETKLKARSA*LFR MMQNPQILAVLQERLDG/LWVETPT/G YIESLPRVVKRRVNALKNLQVKCAQKE TQFYEEVHDLERKYAVLYQPLFDKRFE INAIYEPT/KECEWETR*RKDEDFGGN WKEKGQIEDEKKDEKEDPKG/IFPEFW LTVFK/VNDILLSMVGQHEDEPKLKHLDI KVKFSDAGQPMFVLEHFEPNEYFTNEA VLTKTYRMRSEPDADSDPFSFDGPEIMGC TRVPR*DWKKGKNTLTKTIKKQKHKG RGTVPYCDLKPVSNDFFNFGPLPESSL RSGDLDDAEVLAADFEIGHFYREIRJP RSVVNFTGEAIEDDDDDYDEEGR*RS*G GRLAPHTSRRLVLEFLQHGRH |

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| 1790 | 9841 | A | 2739 | 1 | 435 | PRARAERPAPASCSSPTSTRITPTDTEVDC IVERLFSSSLVAIVSLKAPRKLK VCHFKK GTEICNYSYSNTILAVKLNQRQLIVCLEE SLYIHNIIRDMKVLHTIRETPPNPAGLCAL SINNDNCYLAYPGS*SGEAGAGQQLFAN FNQDNTDTEDEVCIERLFSSSLVAIVSLK APRKLK VCHFKKGTEICNYSYSNTILAV KLNQRQLIVCLEESLYIHNIIRDMKVLHTI RETTPNPAGLCALSINNDNCYLAYPGSA TIGEVOVFDITNLR |
| 1791 | 9842 | A | 274 | 831 | 1102 | HFGRRPQVDCSSGVQDQPGQHGEVQS VLKLIKLAGHGAHL*SQLLWRLRHEN HLNLGGRGCSEPRWCHFTPAWTEQDS V*NNNNNNK |
| 1792 | 9843 | A | 2740 | 3 | 438 | |
| 1793 | 9844 | A | 2741 | I | 1336 | MLLRLORIKTLRPPGCPHPMTTCSAGTLS AVPCVSPRQVVFERRFCLWHSHVEMFT HVLFPVISADTEDVCIVERLFSSSLVAIVS LKAPRKLK VCHFKKGTEICNYSYSNTI LAVKFNQRQLIVCLEESLYIHNIIRDMKVL HTIRETPPNPAGLCALSINNDNCYLAYPG SATIGEVOVFDITNLRANMIPAHDSPLA ALAFDASGTKLATASEKGTIRVFSIPEG QKLFEPFRGKRCVSIPLAFSMDGMF LSASNTEDTVHIFKLETVKEKPPEEPTT WTGYFGKVLMASTSYLPSQVTEMFNQ GRAFATVRLPFCGRHKNILLG*PTIQKIPR LLVGAADGYLYMYNLDPOEGGECAL MKQHRLDGSELTNEILDSASHDCPLVT IQTYGAAAGKAYTDDLGAVGAGACLEDE ASALRLDEDEHPMMIIRTD |
| 1794 | 9845 | A | 2742 | 152 | 1616 | VQDPSPSARPRPGLAARPMANLASQ SGEAGAGQLLFANFNQDNTTEVKGASRA AGLGRRAVWSVLAVGSKSGYKFFSLSS VDKLEIQIYECDTDEDVCIVERLFSSSLVAI VSLKAPRKLK VCHFKKGTEICNYSYS NTILAVKLNQRQLIVCLEESLYIHNIIR MKVLHTIRETPPNPAGLCALSINNDNCY LVAYPGSATIGEVOVFDITNLRANMI PAHDSPLAALAFDASGT*LATASEKGT VIRVFSIPEGQKLFEPFRGKRCVSI AFSMDGMFLSASNTETVHIFKLETVKE KPPEEPTTWTGYFGKVLMASTSYLPSQV TEMFNQGRAFATVRLPFCGHKNICSLATI QKIPRLVGAADGYLYMYNLDPOEGGE CALMKQHRLDGSLGKRPNEILDSASH DCPLVTSDITAGLAGKGTVPSPSTETCP TRDDVLGAVGGACLEDEGAPALRLDEDS EHPPMILRTD |
| 1795 | 9846 | A | 2743 | 122 | 1162 | LGLEGGGASQWVGGRQRLQDCRNRSL QGSPTLIPP/SLQHTVPSRTICP/SLQVGL T/FPRAVPSAAAALGRNLRL*RGWHRI IPPWWASISRAASSWG/TKPPLFKVPSQPE TLGETWVIAMAGTYGGSRNTPRSPGG NFKSTVPR*VQITTPRPGAGLPKPVVVA TSSD*QASRSSPGRSKDGPDPSPALPVS/ RGEPSPSLQPPPPSTR*PSRLRGPRIPSA LSGPLRAPEHAQSSTSPSRWTTSPRMLR APARAPPCSPTLVPVSTPSPPP*RSQ* SGHTPGRFFCSPPRIRASACASLGTDT GSTAYQIAHAPIHIVFLTSLRAFLRAGS CTNHG |
| 1796 | 9847 | A | 2748 | 54 | 188 | NMTKLQVSVSKNILLKMLIKERETQRK GGSS*KSQTQAGKOGAPR |
| 1797 | 9848 | A | 2749 | 572 | 857 | GQKKGFSGMG*GEKGS LGNPSWG TAGG QAPVPQGLTGRFTQGSSGTAGPPAST FCLGGHGA VVGTYGRQMYMEFVFC VGYAQKDKLCPRE |

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| 1798 | 9849 | B | 275 | 53 | 403 | ALVTEFOETHSQDAIEHVLNLANFAYD PSNYQYLRLQLVHLFLDLSSENETLV EFAIGGLCNLCPDRANKEHILHAGQVPLI INCLSSPNEETVLSVITILMHLSPGGRSFL P* |
| 1799 | 9850 | A | 2750 | 3 | 127 | |
| 1800 | 9851 | A | 2751 | 1 | 359 | LILVKAALDGTGHLSPWFGVRCAFQNP GRRGCS/PEGQLQSRV*G*EFQSTAAC EEHYMASIRRSVSPSLSVCTSPLSVLDIL PPTDLYFEQHSPIL*LKVKGSLH*RSSPLR KES |
| 1801 | 9852 | A | 2752 | 1 | 1270 | MGATTMDQKSLWAGVVVLLLQEGEMG FCYVARAGLELLGSRSPASASQAGITG SAYKLVYCYFTNWSQDRQEPGKFTPENID PFLCSHLIYFSASIENNKVHKDKSEVMY QTINSLKTKNPKLKILLSIGGYLFSGKGF HPMVDSTSRLEFINSILFLRNHDFDGLD VSWIYPDQKENTHFTVLHLEAEAFQKD FTKSTKERLLLTAGVSAGRQMDNSYQV EKLAKDLDFINLSDFDHGWSWEKPLITGH NSPLSKGWQDRGPSSYNVEYAVGYWI HKGMPSKVVGMIPITYGHSFTLASAETT VGAPASGPGAAGPITESSGHLAYYEICQF LKGAKVTRGSRDQVVPYAVKGNQWVG YDDVKSMGDQGSVL*RFKTWGGAMIW SIDMDDFTGKSCNQGPYPLVQAVKRSLG SL |
| 1802 | 9853 | A | 2753 | 385 | 570 | KLGTQEQDKGGRILLVWAKHLQLSY*HI RVLISGN*GPGE*MGMPGVILLFFRT KIRIQI |
| 1803 | 9854 | A | 2754 | 1 | 1022 | MTLAPSDODLFVFRSGPAAAGMPCFLF PEVPFCTRVHOPTGRDGSKNLLNELFIAC PGGLMAQGPLDPTSSVPNTKALCGIFS DVAATAENRQTFMQSAIQHLRKYNDG LDIDWEYPGNRGPADTQQLFTILI.KEM YEAFEQESTSRKKPRLMSAAVSAAGKT IETACQIPEMSSSTPSRKEPPRVNAPWE VPYVYKGNQWIRYDNSKSFTLK/AVLPH SKDKV*TTEFFALLCLSPAHGKFTQAEPK SGGDRASGLLQSTHLYPGHQLAPIITAA PGGGSTGGSGFCTGKSKGLYPVPHSKH AFYNCVDEHTYEEACQEGVFDT/SC/SC CNWA |
| 1804 | 9855 | B | 2755 | 143 | 867 | XVVVLLLLQGGSAVKLVYFTNWSQDR QEPGKFTPENIDPFLCSHLIYFSASIENNK VHKDKSEVMYQTINSLKTKNPKLKILL SIGGYLFSGKGHPMVDSTSRLEFINSII LFLRNHDFDGLDWSWIYPDQKENTHFTV LHLEAEAFQKDFTKSTKERLLLTAGVSA GRQMDNSYQVEKLAKDLDINLSDFD HGSWEKPLITGDNPLSKGWQDRGPSSY YNCEICCGVLD* |
| 1805 | 9856 | A | 2756 | 2 | 394 | CSAHSTALRVNRNHFFYTTATQVHKGS SSHPTDRGNEMMASSPQSFAGIPGWG AR*PAPAPLPHRRGLPGSVTG*WRPIVQG */SPHTHICKASTKAQPEGPGIPPP/GKPS WKELPESHKKSLSFSP |
| 1806 | 9857 | A | 2757 | 499 | 1592 | QPSQPLSAGLNQTVPWGTC/LHRAELSP STENSSOLDPDEDVWNSSYGVNDSFPDG DYDANLEAAAPCHSCNLLDSDALAFIL NQCSWGILASRTGLFMPFR/PFRWQLCP GWPVLGTAGCGAVAFFQHLWVPVFGP QGYGSTRSSALL*LGATGVWYGSFAAQ ALLLGGCHASLGHRLGAGQVQGLTLGL TVGTWGVAAALLTLPVTLASGASGGLCTL IYSTELKALQATHTVACLAIPLVLPGL FGAKLKGEGIGLMGPGPLDEISLWA/WF IFWPHGVVLGLDFLVRSKRLLSTCL AQQALDLLLLNLAELAILHGVTPILLA |

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| | | | | | | LFCHQATRTLLPSLPLPEGWFFHDLTLGSKS |
| 1807 | 9858 | A | 2758 | 1541 | 1830 | KRFLHLHQGHTSGKSGRFGHLCGCCGFSS KSP/GS*PGAGGASSSSQSKSPGPRPARV RRRLWVRAPPATSQEEASAGRVRPPSS VHVNIPPPSVRPA |
| 1808 | 9859 | B | 2759 | 4 | 1698 | MGDFTNTPLSTLDRSMRQKVNKDQIELNS ALHHMDLIDYRTLHPKSTYTFFSAPQR TYSKIDHIVGSKALLSKCKRTEITNCLSD HSAIKLELRKIKLTQNHISITWKLNNWLL NDYVWHNEMKAEIKMFETNEIKDITY QNLWDTFKATLNQEEVESLNRPITGSEIQ AMINSLGTKKLQDQTDSPQSSTRDDMIV YLENPVSAQNLLKLISNFSKVSQYKINV QKSQAFLYTNNRQTESQIMSKLPFTIASK IHKYLGVLTRDVKDPFKENYKPLLENIK EDTNKWKNIPCSWIGRINIMKMAILPKVI YRFNAIPKLPMTFFTELEKSTLKFIWNQ KRACIARSILSQRNKAGGITLPDFKLYYK ATVTKTAWYWYQNRDIDQWNITEPSET MPHIYHYLIFEKPDKNKKWGKDLFNK WCWENWLATCRKLKLDPLFTPYTKINS RWIKDLNVRPKTINTLEENLGTIQDIGM GKDFMSKTPKAMATKAKIDKWDLIKLLK SFCTAKETTTRVNRQPTIEWEKIFAIYSSD KGLISRIYKELQIYKKTTPSTSG* |
| 1809 | 9860 | A | 276 | 842 | 2432 | LSLSCSEGGSPKASGSPS*EHCPAKPLGPG TWPLLTGPGESGGGGPDVGLRIGQPMN AAPV*SSPCL*NPGLFTPSGVSSV*MPVL LKEPAFQMAEKAPNGAVCAP/SFPASTS GLWSPAVGVPRSRSLHGSALPWGHAPR Q/SGYPGQSA*AGCGPRPPGGGSRSPGPR SVPGSGAWRWRGRSEACTAPRAWRSA LGESCGPAGSGA*AW*WQTAPSPHWGW IGS***VGHLLRAGCAPCWPLGTGCTG LPSRSGHKSLSLVQVQVWLIRFFFLS* M*KPAACLPS*REPRSCAHWTAGGVMG FLSV*SVIR*SLSHCLAESSPHGAPGGQ TATQIGGGGRYVQRG*NHRPCRS*PIQR PCGQAGSGGRVASTWCAQ*QTPPGSHSP PTANREINPGAAAADTRSCWGHKRSW RGWRGLAPWRLGFGSPWNSRDQGPAGI PAARRGGPTFGFLAHGPR*RRTPRDGRE GGKGAGAKPSETLTRSPVWGRKRGSA NGFLSWVQLQYFAAGNGIWEWEMGRGLRI L |
| 1810 | 9861 | B | 2760 | 1 | 1044 | MGRNRSRKDENSKNQASASSPKDRSSSP ATEQSWMENDFDELTEVGRRLNQEEV ESLNRPIRGSEIEAIINSLP1KKSPPGDGFT AEFYRRYKEELVPFLLKLFQSYEKEVILP NSFYEAHILIPKGRDITIKENFRPISLM NINAKILNKILANQIPQHIIKLNHEDQVG FIPGMQALFHIQESINVIHINRTKDKNHI IISIDAEKAFDIQQRFMLKTLNKLDDMI VYLENPVSAQNLLKLISNFSKVSQYKINV VOKSQAFLYTNNRQTESQIMSELPFTIAT KRIKYLGIELTRDVKDLFKENYKPLLNQI KEDTNKWKNIPCSWIGRINIVKRATLPK* |

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| 1811 | 9862 | A | 2761 | 1331 | 2175 | TEPKTKTT*LSQ*MQKRPLTKFNNPSC*K LSIN/TVLEVARAIRQEKEIGQLGKEE VKLSLFADDIMVYLENPISAQNLKLLISN FSKVSQGYKINVQKSAFLYTNNRQTESQ JMSLEPFTIASKRIKYLGIQLTRDVKDLFK ENYKPLLNEIKEDTNKWNIPCSWIGRIN IVKMAILPKVIYRFNAIPKLPMTFFTELE KTTLKFIWNQKRARITKSLSQSKNKAGGI TLPDLKLYYKAIVTUKTAWYCYQNRDID QWNRTEP**EIMLHIYNYLIF |
| 1812 | 9863 | B | 2762 | 1 | 2898 | MRQKVNKDTEQLNSALIHQEDLIDYRTL HPKSTEYTFPSAPHHTYKTDHIVGSKAL LSCKRTEITNCLSDHSAIKLELTIKKLT QNHSTTWKLNLLNDYVWNNEMKAEI KMFFETNKNKDDITYQNLWDTFKAVCRG KPIALNAHKRRQERSKIDTLTAQLKELE KQEQTHSKASRRQEITKIRAELEKETETQK TLQKJNESRSWFFERINKIDRPLARLTK KRKKNQIDAINKNDKGDDITDTEIQTTI |
| 1813 | 9864 | A | 2763 | 3 | 668 | |
| 1814 | 9865 | B | 2764 | 64 | 1242 | MINSLGTKKLQDQTDSPSSTRDDMIVY LENPIVSAQNLKLLISNFSKVSQGYKINVQ KSOAFLYTNNRQTESQIMSKLPFTIASKJI KYLGVQLTRDVKDPFKENYKPLLNEIKE DTNKWKNIPCSWIGRINIMKMAILPKVIY RFNAIPKLPMTFFTELEKSTLKFIWNQK RACIARSILSQRNKAGGITLPDFKLYYKA TVTKTAWYWYQNRDIDQWNITEPSETM PHIYHILIFEKPKDNKKWGKDSLFNKWC WENWLA/TCRKLKLDPLTPYTKINSRWI KDLNVRPKTINTLEENLNTIQDIGMGK DFMSKTPKAMATKAKIDKWLKIKLSF CTAKETTTVRNROPTTEWEKIFAIYSSDKG LISRIYKELKQIYKKKITTPTSG* |
| 1815 | 9866 | B | 2765 | 287 | 898 | MNINAKILNKILANQIPQHKKLNHEDQV GFIPGMQALFHIQESINVIHHNRTKDKN HIIISIDAEKAFDKIQQRFMKLTNLKLLD MIVYLENPISVAQNLKLLISNFSKVSQGYK INVQKSAFLYTNNRQTESQIMSELPFTI ATKRIKYLGIELTRDVKDLFKENYKPLL NOIKEDTNKWNIPCSWIGRINIVKRATL PK* |
| 1816 | 9867 | B | 2766 | 1 | 1443 | MKLPPEASGSNICCYAIFAVLQPLLVIK ETVSGVDLQQTPTDLQLSLDTPGRKNTK QKGIASPTKRTSTPKPHLQANAQRFC HOACVTRVPKGSTKHGKEQLVPATAKT COIVKNINAMKKLHQLTEIQITREYHKH LYANKLKNLEMDKFLDTYTLPRLKQEE VESLNRPMGSEIEAIINSLPTKKSPPGPD FTAKFYERYKEELYFLLKFSIEKEGIL PNSFYEASILIPKGRDITTKENFRPISLK NIDAKILNKILANRQPIELIHHDQVGF IPEMKGWFKKCSINVIHHINQTNKDNH MIIISIDAEKAFDKTQOPFMLKTLNLGTI RQKKEIGQLGKEEVKLSLFADDIMVY LENSIVSAQNLKLLISNFSKVSRYKINLQ KSOAFLYTNNRHMSQITSLEPFTIDTKR IKYLGQFTRDVKDLFKENYKLLNEIKE DTNKWKNIPCSWIEESIS* |
| 1817 | 9868 | A | 2767 | 1 | 966 | |
| 1818 | 9869 | A | 2768 | 1 | 216 | |
| 1819 | 9870 | A | 2769 | 3 | 2074 | |
| 1820 | 9871 | A | 277 | 721 | 1027 | |

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| 1821 | 9872 | A | 2770 | 1 | 1632 | MHCILPTTSGSQSPVYTSQSQPKTPGAF SGTILSVREPLSPEDVLLPQSGAKCAALC WVFSVLDAASPVTRWVSRSPWECRCV PSPVPREAPVSPPPQCAPPPYTDCLSPYL YEYTVCPSPCARVTPSSHTPWEEKVPPP HAERLCPVSEDPPCLCNWKTAAAGARES SLVPCPYAARYPPSPPRVAWSSHFSYRG LSPSLGPNKPGNPRGFSPPAAASRPRA AAASAPPPGAARLPASPTPLARDRGVS |
| 1822 | 9873 | A | 2771 | 842 | 2353 | TEPKTKT*LSQ*MQKRPLTKFNPNPSC*K LSINIVLEVLARAIROKEIKGIQLGKEE VKLSLFGADDMIVYLENPIISAQNLKLI FSKVSQYKINQVQSQAFLYTNNRQTESQ JMSLPTFTASKRIKYLGIQUTRDVKDLF KENYKLAPLIKEIREDTNKWKNPCSWIG RMNIMKMAILPKVIYRFPAILIKPLTSFT KLEKTLKFIWNQKRARIKSLSQKNK AGGITLPDFKLYYKAIVTUKTAWYCYQN RDIDQWNRTEP*EIMLHIYNLIFDKPEK NKQWKGDSLFNKWCWENWLTICRKLK LDPFLTSYTKINSRWIKDLNVRPKTIKTP EENLGNITQIDIGMGKDFMTKTPKAMAT KAKIDKWLKIKLSFCTAQETTIRVNRQP TEWEKISAIYSSDKGLISRIYKELKQIYKT KTNNPIKKWAKDMNRHFSKEDIYAAKR MHKKCSSSLAIREMOIKTMTRYHLTPVR MAILRIKSGNNRCWRGCGEI |
| 1823 | 9874 | A | 2776 | 3 | 2077 | TAEGTWIAVRRLRLEGTGEMSRVPAFL SAAEEVEHLRSSLLIPLETALANFSSGP EGGVMMQPVRTVVPVTKHRGYLGVMPA YSAEEDALTTKLVTLLRGRPHHLRSSLP TRVIVVTLSPAMGTLTAVMDGKCS*IA KRTAAVNSCHLPPSLFKPPSEVLCLILGAG VQAYSHYEITEQFSFKEVRWNRNKEN AEKFADTVQGEVRCVSSVQEAAGADV IITVTLATEPILGEWVKPGAHNVA SVRPDWRELDDELMKEAVLYVDSQEAAL KESGDVLLSGAEIFA*AGEK*FKGVKPS /YCEKTPRCSSKSLGMAVEDTVAQAQTHP MIPWSSGK |
| 1824 | 9875 | A | 2777 | 3 | 1038 | TAEGTWIAVRRLRLEGTGEMSRVPAFL SAAEEVEHLRSSLLIPLETALANFSSGP EGGVMMQPVRTVVPVTKHRGYLGVMPA YSAEEDALTTKLVTLLRGRPHHLRSSLP TRVIVVTLSPAMGTLTAVMDGKCS*IA KRTAAVNSCHLPPSLFKPPSEVLCLILGAG VQAYSHYEITEQFSFKEVRWNRNKEN AEKFADTVQGEVRCVSSVQEAAGADV IITVTLATEPILGEWVKPGAHNVA SVRPDWRELDDELMKEAVLYVDSQEAAL KESGDVLLSGAEIFA*AGEK*FKGVKPS /YCEKTPRCSSKSLGMAVEDTVAQAQTHP MIPWSSGK |
| 1825 | 9876 | A | 2778 | 2 | 2037 | TFFFQVKPDGTYVKPLSNKLTGYTMV FVRSFLVGEAARALS KACTIAIRYSVR HOSEIKPG |
| 1826 | 9877 | A | 2779 | 3 | 194 | TFFFQVKPDGTYVKPLSNKLTGYTMV FVRSFLVGEAARALS KACTIAIRYSVR HOSEIKPG |
| 1827 | 9878 | A | 278 | 615 | 2182 | PQVIRPPWPPKVLGLQGLITFRDVAIEFS QEEWKCLDPAQRTYLRDVMLENRYNLV SLDTSSKCMKMFSSQTGGQNTVEVHTG TLQIHASHHIGDTCFOEIKDHDFFVQW QENETNGHEALMTK/YQKVDE/CTERHD QRHAGNKPLKMSLDQAIRICLKCTYFT PKGKLVIKLRLRLTMLS/HVSASQRISCRP KTRISNKYRNFLQSSLLTQKREVHTRE KSFQNESGKAFFGSSLLKKHQIHLGD KQYKCDVCGKDFHQKRYLACHRCHTG ENPYTCNECGKTFHNSALLVHKAJHTG EKPYNKNECGKVFNQOSNLARHVRHT GEKPYKCECDKVFSSKSTLERHRIHT GEKPYKCKVCDKAFRRDSHLAQHIVH TGEKPYKNECGKTFVQIHLVMMHKVLA HTGEKRYKNECGKVFNHKSNIACHP* TSIPGRETFTRVMECCQGFNRKSNLER HHRLHTGKS*KC/EICKVFRQOSNLAC HHRLYTGEKPYKCECDKSFQFQITP |
| 1828 | 9879 | A | 2780 | 1 | 903 | |
| 1829 | 9880 | A | 2781 | 133 | 402 | |
| 1830 | 9881 | A | 2782 | 2 | 242 | |

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| 1831 | 9882 | A | 2783 | 26 | 2229 | RFRAGAADLDCHCHLGRCLLRQCLVVA MNPDLRRRDSASFNPPELLTHTLDSPE KTRRRREIENMILNDPDPQHEDLNPLTR SQRYEYAVVRKSAJMVKKMREFGIADPDE IMWFKNFVHRGRPEPLDLHLGMFLPTLL HQATAEQOQERFFMPAWNLAHGHPIAQ TEMGHGHTLSRLSETTATYDPEQEFIL NSPTVTSIKWWPGGLGKTSNHAIVLAQL ITKGKCYGLHAFIVPIREIGTHKPLPGITV GDIGPKFGYDEIDNGYLKMDNHRIPREN MLMKYAQVKPDGTYVKPLSNKLTYGT MVVFSFLVGEAARALSACTIGILYSA VRHHEIKPGEPEPLILDFQTQQYKLFPL LATAYAFQFVGAYMKETYHRINEGIGQG DLSELPELHALTAGLKAFTSWTANTGIE ACRMACGGHGYSHCSGLPNYVNFPTSC TFEGENTVMMLQTARFLMKSVDQVHSG KLVCGMVSVLNDLPSQRIQQQVAVWP TMVDINSPELSEAYKLRAARLVEIAAKV NLQKEVIHRKSKEVAWNLSVDLVRAS EAHCYVYVVKLFSEKLLKIQDKAIQAVL KE/SLCLLYSLYGISQWAGDFLQGSIMT GP/QITPSNPAV*RELLTIRSDAVALVDA FDQDVTLSGVLGRYDGNVYENLFEW AKNSPLEPKAEVHGIFTRHLEVHCQSQA LEVFTDRDKFKSGFQKAPVWQLQLWESF SNSNRL |
| 1832 | 9883 | A | 2784 | 61 | 241 | |
| 1833 | 9884 | A | 2785 | 60 | 341 | |
| 1834 | 9885 | A | 2786 | 70 | 428 | IGGPOGFSPTPSLKPRPRIFKTPPIRGNWG PRPPPGVSPQFGGDTKFNLEILFVVL TFSV*AQSGDPAAPPSPGP/PGGRGERE G*NEKSPVLPQCWGGWRHHPSPAALLW ALIW |
| 1835 | 9886 | A | 2787 | 38 | 243 | TPSTHDKSLTSLIKKKKA*INNFRDKKGN IAKDIPEM*KIIREYYENIHANFENLGI DKNKIDQN |
| 1836 | 9887 | A | 2788 | 2 | 114 | |
| 1837 | 9888 | C | 2789 | 50 | 214 | |
| 1838 | 9889 | A | 279 | 403 | 933 | QQRWQQGWQAWGGQPVQEVGFVWF LLSWLLSRLGVPAQGPARGVDP RP GS RGARGGCSASAAPPARASGPRPCCWNG SRPPAQHRRTPSPATRVGEAGQGEVGRV RLPAPLLQAVQRLSDRSYPAAPARPTA TSP/APPPSPAPKAPVVGALS*GTADPGSD SYPPSRSHAPRP |
| 1839 | 9890 | A | 2790 | 1 | 624 | |
| 1840 | 9891 | A | 2791 | 2 | 851 | |
| 1841 | 9892 | A | 2792 | 1 | 1116 | |
| 1842 | 9893 | A | 2793 | 53 | 1408 | HRCCLWTFQCLSLSGITFLIKEGKEGKL EPAREGPYLVLLTETAVLLISITPTTNS NPITLERFCGLGAETGKDPMGFFVLRQ SLDADEGTAVDIQSFRPQKDFGRRRITL ECHVTGKGGTGKMSNRVVCREASHAG SWYTASGPQLNAQLLEGWLSQVQSTKR ARAIAPHAGTYTCGSCAAHAYKQVDP ITRRIFILGPSHHVPLSRCALSSDIYRITPL YDLRIDQKYGELWKGMFERMSLTQIDE DERSIEMHLPYTAKAMESHKDEFITPILL VGALESSEKQEGFKLFSKYLADPNSLNF VSSDFCHWGQRFYUSYIDESQGEIY*SI EHLDKMGMSIEQLDPVSFSNYLKKYHN TICGRHPGVLLNATELQKNGMMSFS FLINYAQSSQCRNWQDSSVYAAWEHS RATEALNPQGCHLPHSSYSYRGSPA |

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| 1843 | 9894 | A | 2794 | 53 | 699 | SLPSLTPPGSRQPPAGRLNTEHHINEHL MYSLDJNSSQMPSPKAAQTSDDGEIFEVD GEMPNHLLPIKAHVIEDLGMDDEGDDDD PVPPLPNVNAAILKKVIOQWCT/HPHKDD PP*PEDDEEQRKSVDPDIPVWDQGPKG FDQGTLE*NSFLGLQTYFTSKGLDLVTC KTVCOYDQKGLP*EIRKPPFKSKMTFT EEEEAQVRKJENQWCEEK |
| 1844 | 9895 | A | 2795 | 162 | 522 | WVRRGTISPARQRQDVGGAAPANYAKV LWQLAPSPHKCKQQRPTHLCDSIGP LSPVGLPGLKG*PDNSSEGCPS/QALPVP SSPHPGSGGPKGGARSLNCRGCPNW QHRCCRKI |
| 1845 | 9896 | A | 2796 | 2 | 1214 | QPFQSGCVIAILGRKMFSVAHLARAN PFNTPHNLQVHDGLDGLRSSPGTGPKP RRP*RNLLAAAAVEEQYSCDYSGRFFIL CGLGGHISCGTHITVALVPLDLVKCRMK VADPQKYKQIFNGFSVTLKEDGVRLGA KGLAPTALGYSMQGLCKFGFYEVFKVL YSNMLGEENTYLWRISLYLAASASAEFF ADIALAPMEAACKVRIQTPQGYANT*EGI SFPKCIKEKGLKAFYKGVALLWMRQIT YTMN*SSPCLERTV*SHCTSLGVFKPJRSE CSKPEQTCGNHLVAGYIARVFCAIVSH PC*FVWYLVLNKE*SVAVSLLVFSVITLD FKGVWKGFLFARIIMIGTLTALQWFIYI SVKGYFRTILPRP*PPRDGQSLNKNKFLG TPVVRSKQIVD |
| 1846 | 9897 | A | 2797 | 276 | 728 | CFGFVFPFRSWPYGLSTGDVPKLGPPN* AMGGFRPGKQVQSLPGFAGGHAACSPAS LPSGPGAPPRACLPSPRGGKRSILGAPGG FPDGDHSHGAPCSRVTVSPGNDLKPGHS PRTLQRGGSLPRRRWVWSCGVCPVW WPVLSASISGWI |
| 1847 | 9898 | A | 2798 | 451 | 1030 | VPEALSPFEMEGPQFTMCCCSAPPAMP FPTT*QPSEAAAGQGVPGPHRL*GGLAP AGRS*APAGAFWGGQPAQRGEPAYSK GGAAASTQRVL*HRRGHRGDASRGCPQ GDQNLQ*KLCSSRAEGGAVSQPGWPAL PHAAAGEPLASALPGLHAAQAPAFVVS PTTIRSCSGNSGKIFPSSCLDSCFPSS |
| 1848 | 9899 | A | 2799 | 1 | 933 | |
| 1849 | 9900 | A | 28 | 1230 | 1820 | QEYRPSQTPHLALSPERVAPGRRAAGRL APEARAPRGSP/LPPHRVSEKTIRVVVFH PGARKAGGTTPRAPRGDTGGAPGAPTY STPLMSLHRRARLESSSTGSSFPDASAKPV PLAVVSLDSR*GWVESRSIIH/VTN*AS SSSSSSSSSFVRVYPRFIEFLHFDIQTSG Q/RITSRQHPPR/DLRDALF*LSNRIFL |
| 1850 | 9901 | B | 280 | 73 | 207 | ELGTQLRTCTTSLGSLASQVEAHSLVLS HLKTLWLKKISNTIKYS* |
| 1851 | 9902 | A | 2800 | 1 | 1563 | MRREGFKFRSKSVFQDEMTKKWHKSD LHWVSRIQCTVLGVLNATEMRSLPIES LFLIQCFVVSAGSRNEATDCSGECYSSM RETRGSKCEAAARFIKVKGLQKQVESY KLYHPYFLANWFSASFVKVOKLVEMRG QEEETLGTFAHVLMPQAASSRALVLPPT MQLELQFNGTCSYRKPNMASSMRSLF SDHGKYVESFRRLNHSHEHQCMEQFM DKKLPGHIGRIDTKSEIKILSIGGAGGEI DLQILSKVQAQYPGVCIQH*SLRLPSAG TNWPNYKELVAKTSNLENVKFAWHKE TSSEYQSRMLGEKGAFKSWDFYSI*FKM LYYVKDIPATILKFFHSLILGTNAKMLIV CVQSSGWADKLWAKYGSRRPQDDLC QYITSDDLTQMLDNLGLKYECYDLLSTM DISDCFDIGNENGDLWDFLTETCNFNA VIAPDRLRAELGKDLQEPFS/ALRKEG KVLFNNTLSFVIEGITSQSKYIQKLYFE |

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| | | | | | QLES LIYFHIK ITNSSH |
| 1852 | 9903 | A | 2801 | 1 | 6750 |
| 1853 | 9904 | A | 2802 | 3 | 91 |
| 1854 | 9905 | A | 2803 | 3 | 7501 |
| 1855 | 9906 | A | 2804 | 3 | 3223 |
| | | | | | PPPEAAVVAFEWLKSTLTGLHPQLPLSL PQPECAIPLYVRAFSRGDYMGRIQEVG WVTAGLVIWAGTCYIYKFTKGRAQSV RTLARNGSTVKMETVVGVSQSTLAINEA EIKTKPQVEIGAETGARS GPRAEVETKAT AIAHTRANSQAKAMVGAEPETQSESKVV AGTLVMTAEVTLTEVKAKAREVAMKEA VTQTD AEAGKIVKKEAVTQTKAKAWAL VAKTEAKREAMTQTKAETHILAEKETEI NRVMV |
| 1856 | 9907 | A | 2805 | 1 | 374 |
| | | | | | NYFLSLRFDWHSSKS*GHPTCVHCF*/TK NE/CASCHCGAGLLGLGGS GEGASHPC PSCLPLEYRSLHCSLGHCGECMPGASGW GPWTGPGHCPNLCDKGSKRISWRVGR NGWGRPSFDNAPVAL |
| 1857 | 9908 | A | 2806 | 162 | 789 |
| | | | | | AGQNGVSGSAERCLSCLLIPLALWSIENI LLYIPNGHTFYASSNKLTNYVWYSERI*L SGIMMLIVTTVLVLENNNNYKCCQOSE NCSKKYVTLLSIIFSSLGIAFSGYCL/VISA LGSCP*AIC/LAPLMGWQVCF*RALLGRF LTDSSIWDSVPGNLAHVVEVNIILFSILIT LSGVQVHICLRVVMQLSKILCGSYSVIF QPGII |
| 1858 | 9909 | A | 2807 | 1 | 3282 |
| 1859 | 9910 | A | 2808 | 136 | 447 |
| 1860 | 9911 | A | 2809 | 3 | 3593 |
| | | | | | SSDRPSSFVLVWVGLWSMVVRVPPFL LPILFLASHVGAADVLTLLANLRLTDPQR FFLTCVSGEAGAGRSDAWGPPILLEKD DRIVRTPPGPPLRLARNQSHQVTLRGFSK PSDLVGVSFCVGGAGARRTRVIYVHNSP GAHLLPDKVTHTVNKGDTAVLSARVHK EKQTDVIVKSNNGSYFYTLDWHEAQDGR FLLQLPNVQPPSSGIYSATYLEASPLGSA FFRLIVRGCGAGRWGPGCTKECPGCLHG GVC |
| 1861 | 9912 | A | 281 | 276 | 565 |
| | | | | | WTSVSTGQSDQA/GPAPALIQMRPGC GPSVPGGWLE*RDGQAGMGAAAAPA WWLLCIPAGQGPLPGRLPHIPLKFCYC GILVEKKEPRGCF |
| 1862 | 9913 | B | 2810 | 85 | 283 |
| | | | | | MEKTELIRSAWRVISSIEQKTDTSDDKL QLIKDYREKVESELRSICTTVLELLDKYLI ANATNPEX* |

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| 1863 | 9914 | A | 2811 | I | 932 | KAKSRSEVGLASRPRRRGSSRGSSRCG SALALALLRPGPGPAPAMEKTELI QKAKLAQAEBS/YDDMATCMKAVTEQ GA/QSLNEERNLLSVAYKNVGGRRS AWVRVSKHPSRKTDSKCKLQIKDYR EKVDISELRSCTTVLGICLDKYF/LANG NLIPESKVVFLYLMKMGTFTFRYLCL EVA CCDDRKQOTIDNSQGA/YQEAIDISKKE MQPTHIPRLGALLTTSVFFYEILNNPE AC/LHAWLKTA/*WRAIA/LDTLNE/DSY KDS/TLIMQLLRDNLP/WTSDSAGECD AAEGAEN |
| 1864 | 9915 | A | 2812 | 199 | 214 | PPSPLNSSTCCLAKTDEK*CCEKGGSHLH |
| 1865 | 9916 | A | 2813 | 1 | 2176 | QGPLKFMADAGIEFSQDEWCKLDPAQRT LYRDVMLENYRNLVSLGICLPDLVSTSM IEQKRDPWT/LQSEEKIANDPDGRECIKGV NTERSSKLGSNAGNPKCNQLGFTFQLH LSDLQLFQAERKISGCKHFEPVSDNSSV SPLEKISSSVKSHLLNKYRNNFDHAPLLP QEOKAHIREKAYKCEHGGQVFRASASLT NQVIHNDADNPYKCECGKVFCSSKLV HRRMHTGEKPYKCECGKLVFSSNSLSQ HQRIHTGEKPYKCECDKVFSSSKLAQ HQRIHTGEKPYKCECDKVFQIAHLVR HQKIHTGEKPYSCNCGKVFSRHSYLA EQVTHTGEKPYKCECGKAFVSRSLLIT HQIHTGRKPYKCECDKVFGRKCF/LTS HQRIHTREPRYQSCGCKIFSQKSDL/*R HRKTH/DEKPYNGNKGCTAFREFSD/LTA HFLIHSGEKPYECKECGKVFRYKSSLTSH HRIHTGEKPYQM/CNRCGKVFSRSSLV CHQKIHTGEKPYKCNQCGKVFNQASYL TRHQIHTGERPYRCSKCGKAFRGCSGLT AHLAIHTEKKSHECKECGKIFTQKSSLTN HHRHIHGEKPYKCTLCS*GLSVTILTLHSF RGFHIHEGPKYKLC/DGKTIIMSSSINQHQ* VHTKWKSYK*NVCDTGFIAKQITGH HH ITVEDESTQMNCVYLYGYSRTIAIEH DRI YTRSNSVSGSLIYDIA |
| 1866 | 9917 | A | 2816 | 26 | 736 | EPIPVTPDHLRVMTIHIVANLLSCQQR R LPNYEMLKEEQEVAK/LGAPQKPCLP PEC PPVIHNRNETSWPDHVR/LVPVQ/HPL HE HLLRLGFIRFAIYSVSLRDRKM/VGEVN RGPKA*CLHRQSA*KIWGPDFGHLHEPI LAHQSSPPKFVVVPGPANDREASLRPG ALPVTICUPRTLSSIPRAPRGQEVLP/L TCL PLTPPSIPRPVPTAESICISPLSHAFQ WH SIKICIFW |
| 1867 | 9918 | A | 2817 | 748 | 1637 | DIMESGFTSKDYLTHSHFNFRDYLEKYYK FGSRVHSAESQILKHLAKNLFKIFCLD VG GETCL/DIGFWAPLILSSSSSCFVESF* GRJVRSLDYFRTOEPGRELGRK/WLEGE K ARGLFDWVPPMVTMCLNLERETE VKG PRRRRKKLQ/AVKARCLKM*M* TQKPS HLGAVPLPPG*TA VPQAHLC/GCPCPR PPQPTCKGASGTLGQPYLKPRGPS L VIM DAAQEOPTYMIGEOKFS/SLP/LGRE AVK AAVKEAGYTIWFEVISQSYSTMANNA EGLFSLVARKLSRPL |

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| 1868 | 9919 | A | 2818 | 1 | 1538 | MENPIVKSIAKARERLEDSKLEAVSDNN LELVNEHLEDITPLINVDENVAEVLGILKE PHFQSLLEAHDIVASKCYDSPSPSPMEMNN SSINNQLLPVDAILRIGHKRAEPLGVTF RVENNDLVIARILHGGMIDRQGLLHVGD IIEKVNHEVGNPNKELQELLKNISGSVT NLIPCKEAGLKFSKGEILQIVNREDPNW WQASHVKEGGSAGLIPSQFLEEKRAFEV RRDWDNSGPFPGTSSSKKKKMMYLT RNAEFDRIHEIQIYEEVAKMPPFQRKTLV LIGAQQVGRRSKKNRFTVLNTRFGTTVP FTSRKPREDEKDGQAYKFVSRSEMEADI KAGKYLEHGEYEGNLYGTKIDSILEVVQ TGRTCILVDNPQALKVLRTEFMPYVVF AAPELETLRAMHKA VVDAGITKLLTDS DLKKTVDDESARIQRAYNHYFDLIINDNL DKAFEKLQTAIEKLRMEPQWVPISWVY |
| 1869 | 9920 | A | 2819 | 1 | 1749 | EFVLNVEPRVCRWGCSAAPVAEGEQRR RGATSGSGSGGAAAEVRAAMQQVLEN LTELPSSTGAEEIDLIFLKIMENPIVKS AKAHERLEDSKLEAVSDNNLELVNEILE DTIPLINVDENVAEVLGILKEPHFQSLLE AHDIVASKCYDSPSPSPMEMNNSSINNQLL PVDAILRIGHKRAEPLGVTFRVENNDL VIARILHGGMIDRQGLLHVGDIEKVN EVGNPNKELQELLKNISGSVTLKILPSYR DTITPQQVFVKCHFDYNPYNNDLIPCKE AGLKFSKGEILQIVNREDPNWQASHV KEGGSAGLIPSQFLEEKRAFEVRRDWDN SGDELDTIKFDRIHEIQIYEEVAKMPPFQR KTLVLIGAQQVGRRSKKNRFTVLNTRFG TTVPFTSRKPREDEKDGQAYKFVSRSEM KADIRAGKYLEHGEYEGNLYGTKIDSIL EYVQTGRTCILVDNPQALKVLRTEFMP YVVFIAAPELETLRAMHKA VVDAGIH PRL*PNSDLKKTVDDESARIQRAYNHYFD LDPSINDNPRKPFKEKLQTAIEKPENGP QWVPQSAWVYLMQ |
| 1870 | 9921 | A | 282 | 1466 | 2353 | RNVHLNLIHIFLYFKINVFHIDPLGGEK NSGVLGQA VQKQPRGSFPLPRIPQ*QN LRIGI*KGRRGPGSGPWAGDTQHQHPSK GKGLPPLPACPSL**QQGRCSGPGGRL GS*GCKHPECQWSQRGVRPLSVLFQPP PGTGAGPTSWASASGSAGACQPGS/PL GSVHTGSPSAKSPSPSVK*QECQHPHT VSSPVSRPGRPKLPNGNRAGPAAPSPP RDTPAAPPPRPGPPSGSLAQADPGRSLP PPRTRPAAQSPRPRSA SEAEARRGPVR RSRTGREEKSG |
| 1871 | 9922 | A | 2820 | 14 | 230 | FATLYPLKIFIPKAFNPWREVGLPCPPPK /CKGPSKSPGW/CLNRPPIGKILIPCKPR LTWAPPRIL*NGPP |
| 1872 | 9923 | A | 2821 | 170 | 303 | RPLRGTPC*CAAWASSWWGCCSACCSH CCLLGPCWHSQPCSA*WAFWCSGG |
| 1873 | 9924 | A | 2822 | 208 | 547 | AAPGAMGPWPDRLCGSALPSCRPCYSS ASVSLRCAENTTTQAGPCCWAWPHRA HQDFPLQIFRHLAEAPRCSPPLSAWPPRH LLPAGDPDLQEQEPGIRGAP*PRLRGTPC CGS/CVAAGVRGCGPVWL*HPEPADSH TATAEPRI*AAPGAMGPWPDRLCGSALP SCRPCYSSASVSLRCAENTTTQAGPC CWA WPHRAHQDFPLQIFRHLAEAPRCSP PLSAWPPRHLLPAGDPDLQEQEPGIRGAP LSLRRRLLL |
| 1874 | 9925 | C | 2823 | 48 | 173 | MVRKRMEMKMRKLSQLRASGQLKMM RMXMSIPRSRRPRGIX* |
| 1875 | 9926 | A | 2824 | 183 | 423 | |

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| 1876 | 9927 | A | 2825 | 147 | 588 | TLAFLIPCIGSPACPTMSDAAVDTSSSET TKDLKEKKEVVEEAEANGREDRPLCTG NAENVEENGQEA*OLR*DEE/EREGRIG REGGREGKKEG*LVVEEDGRKIEEAE ATGKRATEWDEDDDCRYQSRRPDEDD LDSKKAKS |
| 1877 | 9928 | A | 2826 | 1 | 77 | SGRPPFFFFFFFFFF*CKGFLIGYM |
| 1878 | 9929 | C | 2827 | 175 | 351 | MKLIQLSCQPFNSRHHVVKKKPLTFMILS HFQASLSSIFGCCSLFRQSSFFSNILFF* |
| 1879 | 9930 | A | 2828 | 56 | 380 | KYLVDOHAGSPPVKNILAEAVQNIVQIL H*EIQKSVNHYML*KLDTDSL**FIQLQ NEPTILGIKVDVYKHEYKDKDGHSDFSNY SSHQVFFLLFIENKDNMAIN |
| 1880 | 9931 | A | 2829 | 3 | 129 | |
| 1881 | 9932 | A | 283 | 134 | 385 | CQIMDGMILAIQAWPTPQQVASNGTGLN PNAKVWQELAPGNTDATPVTHGTSSW HELAATSGAHPEGNAEPQKIVVKNMK*C I |
| 1882 | 9933 | A | 2830 | 472 | 756 | SSADSKCTLTIGKPAKSRVQLCHKEETP NOTNAYRTCDV*CLMSPTLLGTSIF*SQ MIIRVVVICMNPNIILISC*VLIRKPVSEL PHLLGF |
| 1883 | 9934 | A | 2831 | 1 | 170 | |
| 1884 | 9935 | A | 2832 | 1243 | 5595 | |
| 1885 | 9936 | B | 2833 | 2177 | 3174 | MGKTTPMIQSRPSFDTWELQVPPSTCGD YNSSPFIKELRASQSNVPPGPVKLKESV VENHAYLSYAVEEEHAYLGTVPKDDK AKTLSYELSSATVSTGSLSYENTDL TDPESFEHMDSDSKQESTTSKEETNIJSS IVPSTQDIYQRQNSSDVHKSLPAVDETT CGHTHFQOMIDKALYQSGKPETHGIME EPELTLISTDTSIAEMDFANLLEEKSEN EAKCFFQOSKTRLKRLKRVKHAFTPLA TEASDYPVAVSELIEKPRATSETPRRLTP VPGSLQEAFIGRKKKSMERSHQRQKEIR NKIHVSENSQIKTVKEKPSISIL* |
| 1886 | 9937 | A | 2834 | 2268 | 2547 | KYLVDOHAGSPPGKSLCCLKSQRMMM ISQNLDDVLRV*TADDAN*EKCVPILANL FFQVSNLLH*(VLVYHLLKVCVTCFSFIH CRQORFMNV |
| 1887 | 9938 | A | 2835 | 137 | 716 | TTTTSSSKAKTKTKTKRPIQRATSNVFA MFDQSQIQGVQRGPFNMIDQNRDGFHS DK/EKVLHDMALASLGKNPH*WHYLD MMNEAPGPIQFSPCFLTLFG*GSLNGHQ IP*RCSPKRKLAFALDEEATGHFPREDYL /REELLTNPWGDVYQIEEVG*TCGEAP I*QKGGNSNYHRSFTRHPNWKAPKAQR |
| 1888 | 9939 | A | 2836 | 2 | 437 | LVIESDLERAERAEALSEGKSDSWKNN* E*WIRP*KH*WLORISKCAELEELKTVT NNLKSLAEQAEKYSQKEDRYEEIEKVL DKLKEAETRAEFAERSVTKLEKSIDDL DKFLCFTSPKTPSSWMSHLSLCLCFLSS |
| 1889 | 9940 | A | 2837 | 1 | 834 | GSVRRAAAGLSHCSPPARIPSGAMAGS SSLEAARRKIRSLQEQADAAERAGTLQ RELDIERKLRETAEA/DVASLNRRIQAW FEFEFGFVPERLATAFQKLEAEAKAA DESERGMKVIESRAQKDEEKMEIQEIL KEAKHIAVEDADRKYEVEARKLVIESDL ERAERAEALSEGQVVRQLEQLRIMSDSL KALMAAEDKYSQKEDRYEEIEKVLSDK LKEAETRAEFAERSVTKLEKSIDDLKVK AHAKEENLSMHQMLDQTLLENLM |

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| 1890 | 9941 | A | 2838 | 9 | 1108 | PDRATRPRPRARPADPAI VLGPLAAVMT GAGKKMMRLKLDKENALDRAEQAEA DKKAAEDRSKQLEDELVSQKLLKGTD R*TGQIL*RLSKMPKEETWNWQEKKATD AEADVASLNRRIQLEVEELDRAQERLA TALQKLEAEKAADEWSEGRMKVIESRA QKDEEKMEIQEIFT*KRAKHIAEDADRK YEEVARKLVIESDLPEPCRGSGAELSEGK CAEA*KEEFENL*FNNEFVHLEGSRLRK YSQKERPDMEEIEKGFPPDKA*RRLETR AWSFAERSVT*NLEKSIDDLEDRAVTL QETEVQSHQRRSWDHALNGYDFHISFFA SLLPRLPRRSWMSHLSELFHLSYPADPG SLS |
| 1891 | 9942 | A | 2839 | 3 | 268 | |
| 1892 | 9943 | A | 284 | 305 | 1129 | DICKEYEVMYSSCETTRNTGIEESTDG MILRPEDLSYQIYDVSGESNSAVSTEDLK ECLKKQLEPCFSREKLSKDLYLISQRDSD QFIPWTAANMEEIKLLTDPDLILEALRS SPMVQVDEKGEKVRPTHKRCIVILREIPE TTPIEEVKGLFKSEYCPKVISCEFAHNSD WYITFQSDTDAQAFKYLRKEVVKQFKA RPLAGIKAINTPFC*EWSSNGILESIVHP I*TAQYASPVFMOPVYNPHQQYSVYSI VPQSWVSKSYTLL |
| 1893 | 9944 | A | 2840 | 500 | 682 | |
| 1894 | 9945 | A | 2841 | 1617 | 2086 | GLAASSRKHQMVDADAVGGPGPGMG AGCDGLPGGFGSDIRPRLWLWLGPRJLW SS*RGTNILASVPKLLLM/DCYALARD RTATLGTDFDAISK TASNWIPDLWKETVF TKFPYQEFTHL/VKTHTRVSKQKTQVP AVATTAARQTMEOGAPEYI |
| 1895 | 9946 | A | 2842 | 55 | 665 | AMAEHDHGLSNGDPGEVTVQGLELVSA AAQDVLVLLDGIQGLFLTQFDNIWVWDH FLGKLPHRVFKGGGKQHLAVPGQHPL DADALJLVALSQYHDSILQKHLDFLGI NELDLEHQSTVPGVPMTCISLIFWPLSN LLPRTA*ASFSSG*NLPICSIFFPV*SASSY VGERHRHWGYLSDGSTRLSMAKTKAA VLPVPD |
| 1896 | 9947 | A | 2843 | 43 | 548 | |
| 1897 | 9948 | A | 2844 | 1 | 876 | |
| 1898 | 9949 | A | 2845 | 222 | 482 | |
| 1899 | 9950 | A | 2846 | 3 | 218 | SLFOLKTTKTQSRVMGAIYDSSWFQEDR QAAERFTDRSTHLRLNAEAAA*TKPAQ GPGSIPILPATPSSL |
| 1900 | 9951 | A | 2847 | 322 | 452 | LCCSI*TYLNNLLIC*QSFSVLK*DFRVD* KKKNPRMSHRLVNL |
| 1901 | 9952 | A | 2848 | 3578 | 5288 | TESREHFSWPVYSVTAARRPQVASKAEN LLMVLGTDMSDRRAAIVADTLTLLFEG IARIVETHQPIVETYVGPGRLYTLIKYLO VECDROQVEKVDKFIKORDYHQOQFHV QNNLMRNSTTEKIEPRELDILTEVTLMN ARSELVLRFLKRRSSDFEVDGDSMVS*E VKQEHQKCLDKLLN*LAFLSCYHORELI GLYVTMEEFMKETVKNKAVALDTYKGG QLTSSMVDVFIYVKKCIGRALSSSSIDC LCAMINLATTELESDFRDVLNKLRMGF PATTFDQIRGVYSAVNIMHSSLQGGKF DTLKGISTDEAKMSFLVTNNVEVCSENI STLKKLTESDCTKLFSGGIGGEQAQAKF DSCILSDLAAVSNKFRDLLQEGLTENST AIKPVQAWINSFVSFHNEEEFNDYE ANDPWVQQFILNLEQQMAEFKASLSPV1 YDSLTLGLMTSLVAIVELEKVLKSTFNR LGLLQFDKELKSLIAYLTVTYTWIRDK FARLSQMATILNLERVTEILDYWGPNMS GPLTWRLTPEAVRQVLALRIDFRSEDIK |

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| 1902 | 9953 | A | 2849 | 233 | 801 | VVILTGSNLVYFCSLFIFSLPDQDVS *ICYLSPLDVCFCNVKIQFFFLSLESYY *FLTIFPHCFYFLKTPFKHRELFIIVPGL LKIFQ/LC*FFYLILLRFYFIFCFLLDLF LFWIFIWYFVIFACSWFVIGSLKFLLVPL/ CSFFLRCRHSPLF*GAS*TDLYLGCIFFP* VCLLWEPCCGL |
| 1903 | 9954 | A | 285 | 1053 | 1403 | TFTQDSAGSLVVHSPMTSIWKTAEVSDQ GHFFIILILFVYLLFETGSHSVTHATMQW CDHSSLQFQTP/SGSGDPPTLAC*VPGIIG MCHHTWLIFITFAETGSHHVPRLYSNSP LA |
| 1904 | 9955 | A | 2850 | 170 | 494 | |
| 1905 | 9956 | A | 2851 | 70 | 1474 | RESGTWQPGKAGTGTGAKPWEVISDEH GIDPTGTYHGDSDLQLERINVYYNEATG GKYVPRAVLVDLEPGTMDSVRSQPFQGI FRPDNFVFGQSGAGNNWAKGHYTEGAE LVDFVL/DV*RKEA/ES*DCLQGFQ/LTHS LGGGTGSGMGTLISKIREEYPPDRIMNTF SVVPSPKVSDTVVEPYNAILSGHQLVEN TDETYCIDNEALYDICKTLKLITTPPFG DLNHLVSATMSGVTTCLARPPGQLNADL RKVA VNMVPPRLHFFM/GGFAPTDQA GASQASTRALTVPRSSPKQ/MFDAKNM MAACDPRAWAAYLDGLPPCFRGRPHVPL KEVDEQMLNVQKQKQAFIVEWIPQQ CEKRAVCDIPIHLRGLKNVRPPSGKQAR PIPGAFSKPHLPKQFHGFCFRKALPSPFIT GGEGMDMEMFHPRPESKNNDLVSEYQ/ QYQDATAEEEGEFEGRSLGRKVA |
| 1906 | 9957 | A | 2852 | 284 | 359 | QQEANPSAPLQHVSTSN/CVLTCCKGA EGLASCCYCHCLCNECCQAGACGPDTHL AHCRCQHQSSKPPGGPRI/ASTQTCYY* PCRLPGGSRT*CLASCPYHWCWPTSLPG SPVPNKAPP |
| 1907 | 9958 | A | 2853 | 295 | 478 | |
| 1908 | 9959 | A | 2854 | 1 | 1167 | |

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| 1909 | 9960 | A | 2855 | 3 | 1328 | SGILGTTTPSEFVGVVLRVECLCPGPAP MSVPAFIDISEEQAAELRAYLKSKGAE ISEENSEGGLHVDLAQHEACDV/CLKEDD KDVESVMNSVSVSLLLIEPDKQEAALIE SLCEKLGPNFREGEPRLRLQFVKATF STGMD*EILPVKIHVSVCISLKVVAASCO AIQYHPQLEPGIKFRKWDFLWNWLTG KKSTPLKTTFMKALVDCKKSDAASKG MVELLGSVPGGQCFPRARVDAHRICV RALKDPNAPFPDHLTLKPRQVFWKGE LIHIVFP*PNFVSA*MGHHMSRFYPD*LR TFH*IPLPGVITMDPGIWPKMRLFLLLWG MQQ*ENREISFWITMPARNFRIGA/DDIV EAFVIDAGKELKMVYQCQWNSRPQRKV VSHSTRITFGKQQWQQTV/YDTLNAW KQNLNKIVKNSLLSPSGYLKFLCL |
| 1910 | 9961 | A | 2856 | 377 | 2393 | FSLECLGHENR*D*ITTYKTSLGTGKVFN KIQHPFTIKNKK*KTLLNKLIGEGFNFLNK GIYEPMVSIILNGEGLDYFPLRSETRQG CLLWPLFN/VLDSQERAIRQENKIKV* VGKEEV*LNRMGDDMVVLVIVIQGKI* KIQRHDLINKFSKVTGYRI/NICRKLVI HI*YQLNKSQNDVKKT*FSTMVKGGL CRVITLWESEARLEARRPAWETVRS HLYKKNQTKNNKQTKN/TLDVMTLICRL SYSEAEV*GWLEPQSSKLQ*AITGSLQSS LDRQS*TLTKKTKKKRKLTAASERVY QYN*GSRND/PHLSSN*LENSA*GQFQ WGGKIVFFIK*CLETWISTWQNNGNWDS YLILHIKINSELT*DLNVRANIVSIFKENM GVNLSDFELGNDFLNK*/PLKTAQATKEEN R*IKIKITCVSKDNKKAKIQPTE*DNFFN HVLVKGIGIC*NM*RTVTIIRHIIQFLKI QQGVWN*QFSKGGYTKGFLRHMEKVSQ PSLAIREMQMRSTMRYHLTPLE*YINQS DNKICW*GCREIGTLMHCWVWYPRDIKT NVYTKCAQMFLPALFT*AAQ*NGP*FLS NLTSALT*KTWHIHI/MEYYSSQ*KKEMKV LIWPTTMEKPLEKPYPSEECPRHERPTY YMSIYMKCPRTGEYI |
| 1911 | 9962 | A | 2857 | 3 | 445 | GEFADSF/SSMGSPVNAQDFCTDLAVSSA NFIPVTVAISTSPDLQWLQPALVSSVAP SQTRAPHFPGVPAPSSGAYSRAGVVKTM TGGRAQSIGRRGKVEQETDQLEDEKSAL QTEIANLLKEKELEFILAAHRPACKNPD DLGFPE |
| 1912 | 9963 | A | 2858 | 295 | 1622 | DEMSVAGSFLTAACGTGNSPHLCPEHA RSRRLSPSVLF*DFCTDLAVSSANFIPTVT AISTSPDLQWLQPALVSSVAPSQTRAP HPFGVPAPSGAYSRAGVVKTM/TGGRA QSIWQEGARWEQVRNF*RTLPNGVAGAG WEAAPEMQEPSTEDAT*WGLLAHP*LG ALAPSPFHPNSDSEFS*EVL*FLP*VSY RMLSDWALLCSLAEDLILNASHT*SATA GQKWFGSGVPGSREAAAGASTGVGEWR *WQTLNLLNVGL*LF*LSPEEEKRRIRR ERNKMAAAKCRNRRLTDLQAGRYS VGCSFLKLGKVGRLHEKGP*VRLCLYA FPLSLCIQETDQLEDEKSALQTEIANLLK EKEKLEFILAAHRPCLARFPDGPAGFPE EMSVASLDLTGGLPEVA/TPSEEAFTLP LLNDPEPKPSVEFVKASA |

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| 1913 | 9964 | A | 2859 | 3 | 1467 | PHLQRATEKPRLSRRPRRSERAVTVLLPS SASQRPVPVAPRPLARLCLTATMMFSGF NADYEASSSRCSASPARDSLVSYYHSPA DSFFSMGSPVNAQDFCTDLAVSSANFIP TVTAISTSPDLQWLVQPALVSLWAPS QTRAPSTFSESPPPTAGAYSRAGVVKTM TGORAQSIGRRGKVEQLSPEEEKKRRIR RVERNKMAAAKCRNRRRELTDTLQAV ETDQLEDKKSALQTEIANLLKEKEKLEF/ LSLAHHRFAICKPLIDLGLPRKEMS SVGS NLDLTGGLPEGSVTFSEEAFTLPLNDPE AQGPQWEPVQGGISRHGS*KDRGPFDDF LFPSTHGPSPGLRTARSVPDMGPILGPF YGRQIRGAFSHSGSLGMGAHGRGWEP LCTPVVTCIPSCNCLHVFPRFHLPRG*LL PQLCSCPQGGQQQ*AFI*LAQLTHAAG PVRGQGRGSRHPQVPLPELVHYREEKH IFPRGFL |
| 1914 | 9965 | A | 286 | 259 | 506 | PGYRRGHGGAEEGRQEPAAHRHNPAVRE DADGGD/RPSAACPGTSTAPPQT*GSG QAHRDGRAPAPAPRPSHF'SAGPAAGPSG |
| 1915 | 9966 | B | 2860 | I | 196 | MAEGNHRKKPLK VLES LGKDFTLGVLD NLVEQNVLNWKEEEKKYDDAKTEK VRVMADSMQEQX* |
| 1916 | 9967 | A | 2861 | 1 | 988 | MGSLEGNHRKKPLK VLES LGKDFTLGVLD NLVEQNVLNWKEEEKKYDDAKTEK KVRVMADSMQEQRMAGQMLLQTFN IDQISPNKKAHPNMEAGPESGESTDAK LCPHEEFLRLCKERAEEIPIKERNNRTR LALICNTEFDHLPFRNGADFDITGMKEL LEGLDYSVDVEENLTARDMESALRAFAT RPEHKSSDSTFLVLSHGILEGICGTVHD EKKPDVLLYDTIFQIFNNRNL SLKDKPK VIVQACRGANPSGN*WVRDSPA SLGKW SQSSNLEEDAVYKTHVEKDFIACSSSTP KYSWCCHLEEVFRKHCQ |
| 1917 | 9968 | A | 2862 | 12 | 914 | GSFQRCKKGQRLFPMAEGNHRKKPLKV LES LGKDFTLGVLDNLVEQNVLNWKEE EKKKYDDAKTEKVRVMADSMQEQK RMAGQMLLQTFNIDQISPNKKR**IGVTE AETIYVLYPAAHPNMEAGPESGRIL PDCLKLCPHHEEFLRLCKERAEEIPIKER NNRTRLALICNTEFDHLPFRNGADFDIT GMKELLEGLDYSVDVEENLTARDMES ALRAFATRPEHKSSDSTFLVLSHGILEG ICGTVHDEKKPDVLLYDTIFQIFNNRNL SLKDKPKVIVQACRGEGC |
| 1918 | 9969 | A | 2863 | 12 | 1353 | GSFQRCKKGQRLFPMAEGNHRKKPLKV LES LGKDFTLGVLDNLVEQNVLNWKEE EKKKYDDAKTEKVRVMADSMQEQK RMAGQMLLQTFNIDQISPNKKAHFIM EAGPPESGESTDAITLCPHEEFLRLC*RK ELKEIYPIKGRRKQPTAGLFFCITEFDH LPPRINGADFDITGMKELLEGLWDYSV GVGRRFLTARGMDSALRAFATRPEHKS SDSTFLVLSHGILEGICGTVHDEKKPD VLLYDTIFQIFNNRNL PQV*RDKPQOGSI VQACRGANPSGN*WVRDSPA SLGKW PSSQSSGEPWRKDAV*QDFHV/ERRDFIG FPGSFRPHNRAPWERPAQWGSIFITQLI TCLPRNIPWCC/HTLEEVRKGT AIHLETP RVAQAQMP TIERTVR*QGYFYLPGFGE NWEGHKQSPSLNPTFKEAPFVYACIF |
| 1919 | 9970 | A | 2864 | 66 | 392 | |
| 1920 | 9971 | A | 2865 | 131 | 551 | KIRGVSCPSAPKSGEQTQHHNINTGFHP LPLGAVTSPVQPGGDRLCPPSPSPEPAQ PAQ/C*PCSDSGRSPGPGKAWTVAPC/ PEPSVFCLQSPGFEPWVLA AHPPSSERR ASSGLDDDLPAQETGNGSGATRTCS |

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| 1921 | 9972 | A | 2866 | 943 | 1109 | LMVLSDFIFKLKI/WPGAVAHACNLSLTLG GRGRWIT*QQQFETSPASIVKPPSLKKI |
| 1922 | 9973 | A | 2867 | 112 | 1078 | ESSRQALLAKPLSACAEQPARAEVGAAT ALPVRWASGEMAPSGSLAGPLAALVLV LWGAPWTHGRRITNVRVITDENWRELL EGDWMIEFYAPWCPACQNLQPEWESFA EWGEDLEVNIKVDVTKQPGLSGRFII YALPTIYHCKDGEF*AVIQPRTKKDFI NFISDKKWKSEIPVSSWFGPGSVLSSMS ALFQLSMWIRTCHNYFIEDGLPVWGSY TVFALATLPSGLLLGLCMIFVADCLCPK RRRPQPPYPYPSKKLLSESAQPLKKVEEE QEAEEDVSEEEAESKEGTNKDFPQNAI RQRLSGPSLATDKS |
| 1923 | 9974 | A | 2868 | I | 448 | |
| 1924 | 9975 | A | 2869 | I | 536 | |
| 1925 | 9976 | A | 287 | I | 2072 | FRRSPPFAAVSLGLGVAVVSSLVNGSTF VLQKKGIVRAKRRTGSYLDIVWWAGIT AMAVGOIGNFLAYTAVPTVLVTPFLGAL GVPPFSGILASVLLKEKLNILKGVGCLLSC AGSVVLIHSPKSESVTTHAELEEKLDQS RVGGLPCASLLVMLAAHLLDPCRFMG PPTSWTSASAPCWADTPCLPPRASGWR PKTSCITTRPVREPSACAWYSWPCSA SSSSGTRNKALECFDSSVFGAIYVYVFT TLVLLASAILFREWSNVGLVDFLGMACG FTTVSVGIVLMRVKKEFNFLGEMNKS DTWRQSSPLIVAPRDHFLERGVOFQNM NSVMGSHLVMVALSPGVDFIOPDDPAA LLVTELFANRLVSGYAPATGLQGITLQY GNTLMEVMMPKICRLPRHECGSPGPGSC APPPSPHSTR/RRPPRSAD/CGPKCTGTTR RERAFGAG*AEAGPPEGGVGAGAA GAGAADAGAGGADAGAGGAGAGAGG AGAGAGGAGAGAGGAGAGAGGAGAG AGGAGAGAGGAGAGAGGAGAGAGGA GAGAGGAGAGAGGAGAGAGGAGAGA GGAGAGAGGAGAGAGGAGAGAGGAG AGAGGAGAGAGGAGAGAGGAGAGAG RAGAGAGGAGAGAGGAGAGAGAGAG AGGAGAGAGGAGAGGAGGAGGAGGAG SHGGLHLWRPC |
| 1926 | 9977 | A | 2870 | I | 5193 | |
| 1927 | 9978 | A | 2871 | I | 356 | |
| 1928 | 9979 | A | 2872 | I | 401 | |
| 1929 | 9980 | A | 2873 | 151 | 5459 | AGARRRRGRGGEAPLLFGLAAEPPRAR PDGLAEFAVRGRRVSGSPRGTMSAKVR LKKLEQLLLDGPWRNESALSVETLLDV LVCLYTECSHSLRRDKYVAEFLEWAK PFTQLVKEMQLIHREDFEIIKVICRGAFGE VAVVKMKNTERTYAMKILNKWEMLKR AETACFRRENDRVLVNGDCQWITLHY AFQDENHLYLVMDYVYGGDLLTLTSKF EDKLPEDMARFYIGEMVLAIDPHQLHY VHRDIK |
| 1930 | 9981 | A | 2874 | I | 764 | MEKIPILRSLRAREQQAGKDVTLQGEHQ HLPEPGCQQTVP LSVGRRPPDTPGPETNS MEAAPGSPPGEGCPACSRCLRWEPFGR PCE*PEESPAGT/PAPCPGSPGPAAGS LPPLPG/PLPQSPRPSA/SGAPAGHRHPEG GAGQAAEGQ/GPRGQPRSSLSQTPRPL AAPVPMARGLAWQDVSEPPPGCSGL NSSQKSPISERPFPVSGEAGP/DGSSHS AQRLQPPNRAGSGLESVSVSLEQSGRGA RD |

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| 1931 | 9982 | A | 2875 | 1 | 1641 | MKVCCSIAEVSDDTTPPSRTNSGHMTSV LKQALKDPCRTIRHYLVLTWLERTEVL DLFIERFCMTGGNSPICYLKAYHTNLVLS ADAEEKVREIAIDEGIAAATIFSFRDVBVS QSQRLRAFDFDAVLFSDESERIVKATLD RFFEHEKAHENKPLAQEQGSTSFDPKVE AFKSPSVPLPITGHSAANVYQTPTCARRRT TRPLVNWELPRDNPPLPQAFRDLGQS PAFSDAVATTSAVPPGGDCHLSEVRGAE TRQPAFAMKRPKEPSGSDGESDGPIDVG QEQQLRSSKLEKAEVLQMTVDHLKMLH ATGGTGFFDARALAVDFRSIGFRECLTE VIRTPTIWLLPGRSKAVESQSQQGTGAHS TLGEPTAKKA*SNPQVYMDIKIGNKPA CIQTLRLSDVVPMTTENFLYMCTH/SKGL GFKGSSFHRIIPQICQGSDFTHGGTRG KSIYKKKFDENFIKHTGGLRRHGTG CPMAHLALMEASKGQDQHPILRRKERA QQVHDVVKLTRGRGRISLKRARSCLK DKETGLCTLTWH |
| 1932 | 9983 | A | 2876 | 1 | 949 | |
| 1933 | 9984 | A | 2877 | 185 | 339 | |
| 1934 | 9985 | A | 2878 | 673 | 1085 | GEPTAKKA*SNPQVYMDIKIGNKPA QTLRLSDVVPMTTENFLYMCTH/SKGLG FKGSSFHRIIPQICQGSDFTHGGHQS AQHGTCPCMAQFGPHGGLKRAGAPSS TIGKERAQQKQESAITSPQRSWKLT |
| 1935 | 9986 | A | 2879 | 141 | 1959 | PRPANLLKGGQITMSATVVDVANAAP LSGSKEMSLEPKMTREDWRKKKELE EQQKLGNAPEVDEEGKDNPHIPQYISS VPWYIDPSKRPTLKHQRPQEKQKQFSS SGEWYKRGVKENSITTKYRKAGACENCG AMTHKKKDCFERPRVRGAKFTGTNIAP DEHVQPQLMFDYDGKRDWRNGYNPEE HMKIVVEYAKVDLAKRTLKAQKLQEEL ASGKLVEQANSKHWGEEEPNSQTEK DHNSDEDEDKYADDIMPGQFDSKR RTVNRNLRIREDIAKYLRLNDPISAYYDP KTRAMRENPYANAGKNPDEVSYAGDNF VRYTGDITSMGQTQVFAWEAYDKGSE VHLAQADP*TKLELLYKSFVKVKVEDFKE QOKESILEKYGGQEHLDAPEALLA/QT EDYVEYSRHGTVIKQGERAVACSKYEED VKIHNHTHIWGSYWKEGRRGNKCHSF SKYSYCTGEAGKEIVNSEECINEITGEES VKKPQTLMEHLHQELKEEKKKKKKKK KHKRSSDSDDEBKHEKLKALNA*EA VRLHLVKETMQNDERKRPVNSMY*TSR PUEEEMEAYRMK/RQRPDDPMASFLGO |
| 1936 | 9987 | A | 288 | 1 | 390 | ITLGPDSIGHWSGNQHKQDPYIASMEHH TDVWVNDIVLCCNGKTLISSDSTTVKVV NAHKGFCMST/YKDT*ASSLSGNKDSIYS LAMNQLGTHIVSGSTEVLRVWDRPTCA KLMKLIGHTDNVKAALL |
| 1937 | 9988 | A | 2880 | 711 | 1140 | GVGVCFPPVPSRLVLGRWAACALPGR SLRKSRLWGWTGHTQS*EGELPWKAQ/ WQRCFWRGGGRTLP.TCSPTRGCR AQEGAGCKARGAWWVSPRGRPLR RGGSRVTLNSQMGSDATGETEWIKEMK PKKKKKMS |
| 1938 | 9989 | A | 2881 | 1 | 649 | MAGALVRKAADYVRSKDFRDLMYLMT QQPYKVFNSGPWAFSSSYMSRPSAHSS LIVSRVGSSTSFQGGLGAGMGVEPLDP HENLYVDYRGRFIHNCQNLANKMSFG RSQSEKAAYYLVPTTQRSKGKIMELVE RSVVARVEHFWGVPANWGLPIAINDM KKSPEISGRMTFVQPRNWLLFACHATN EVAQLIQGGRLIKHEMTKTASA |

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| 1939 | 9990 | A | 2882 | 1 | 389 | |
| 1940 | 9991 | A | 2883 | 27 | 554 | LAVGCRGVGLGVIGSGKRQQRQGLGV SVSAQPCAGALVRKAADYVQSKDFRD YLMSTHFWGPVANWGLPIAINDMK KSPGDYSVGRMTPALCYSYLTMEILP YK*QI*PLNWL/LCFACHGTNEVRPSFIQ GEGRLPNTRMDLKRASGINWQGGKN KVFEGLSLCPGCC |
| 1941 | 9992 | A | 2884 | 1 | 162 | QCAFKIASNPQIVVAMAKESVNAAFKIT LPEGDDRKEGMTFFVEKKRANFKDQ |
| 1942 | 9993 | A | 2885 | 1 | 196 | |
| 1943 | 9994 | A | 2886 | 148 | 427 | CLLGFTTHSASHDOPLPAGAGGTQRLTR AVGKSLAMEMVLTDGRISAQDAKQAGL VSMICAVETL*CLLGFTTHSASHDOPLP GAGGTQRLTRAVGKSLAMEMVLTDGRI SAQDAKQAGLVSMICAVETLVGGAIQC AEKIASNSKIVVAMAKESVNA |
| 1944 | 9995 | A | 2887 | 1 | 1484 | EATLTRFRPAGGFAAGWYCPASAKTSGQL GAGFTFSPLEHICPLSPSILAVHPAGAGP VQOANREAPASPIFGLACCSGPVPLDNA AGTPRIFTSPTLRPLARGANFEYHIAEKR GKNNTVGLIQLNRPKALNALCDGLIDEL NQALKTFEDPAVGAIVLTGGDKAFAAG ADIKEMQNLFSQDCYSSKFLKHWDHLLT QVKKPVIAAVNGYAFGGGCELAMMCD IIVAGEKAQFAQPEILIGTIPGAGGTQRLT RAVOKSLAMEMVLTDGRISAQDAKQA GLVSKICPF*DIOWKEAJQFAEKIASNS KIVVAMAKESVNAAGRSPNLSECIYLEGV AVPRACRWLEAGYSEESILKERRLSPE VFGKVLPLWERMLAPALEPQRLPPSAHL DLLCLASCKERAWNEQSQRRSWCRPRP ALALVLSFLVILGYPSLFAAPLPHSLSS RAQFAISPFQILSLLGAVGYRSVTFGGH SRAVGSARSPLGQCL |
| 1945 | 9996 | A | 2888 | 1 | 946 | GRGVQRAMAAALRVLLSCARGPLRPVVR CPAWRPFASGANFEYHIAEKRGNNTVG LIQLNRPLPVNWLCDCLID*LNQGLKIF EEDPAVGAIVLTGGDKAFAAGADIQGG LQNLFSRDCYSSKFFGRHWGPPSPRVK KPIVAAVNGYAFGGGCELCCH*CVDIIL/ YAGEKAQFAQPEILIGNLPRVRGGTQED SPVPVVGKSLAMEMVLTDGDPDQPDQA QASRVLSKICPVETLVEEAIQCAEKIA/ SNSKIVVAMAKESVNAAFEMLTGEGSKL YEKKLFYNLWPLDDRRERG*PRVGE KGPTFKDQ |
| 1946 | 9997 | A | 2889 | 1 | 384 | VRDYNLTTEEQKAIKAKYPPVNRKYEYL DHTADV/QWIVLHRA*YIFRLHAWGDT LEEAEQCAMAMFGYMTDTGTVEPLQT VEVETQ/GWGEFSLSKHPQGTVEKAIT SAMQVYNEENPEVFIIDI |
| 1947 | 9998 | A | 289 | 1 | 1050 | FRVNMQDGGPSPAEHSAEESAGMEAR FLGLPDAAGSSGPTPARCPCAPRAGVS YVIRDEVEKYNNRGNVALQLDPALNRLF TARRDSIIRVWRVNHQKQDPYIASMEHH TDVWINDIVLCCNGKTLISASDDTVKVV NAHGFCMSTLRTHKDYVKALAYAKG* VELVASAGLDRQIFLWDVNTLTALTASN NTVTTSSLGSKNDISYSLAMNQLGTIIVS GSTKVLVRWDPRTCAKLMKLGHTDN VKALLNRDGTQCLSGSSDGTIRLWSLG QQRCIATYRVHDEGVWALQVNDAFTHV YSGGRDRKIYCTDLRNPDIRVLICEEKAP VLKMELDRAADPPPAI |

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| 1948 | 9999 | A | 2890 | 1 | 332 | RDYNLTTEEQAIAKAYPPVNRKYE*DDL QSLFHFLEDEWLYKFSADEFFPREVKVL SIDQRNFKLSRGWGEEFSLSKHPQGTVE KAITYSAMQVYNEENPEVFVIIDI |
| 1949 | 10000 | A | 2891 | 3 | 425 | SFMAQEEEDVRDYNLTTEEQAIAKAYPP VNRKYEYLDHTADVQLHAWGDTLEAAF EQCAMAMFGYMTDTGTVEPLQTVET QVHADEFFPREVKVLSIDQRNFKLSRG WGEEFSLSKHPQGTVEVKAITYSAMQVY NE |
| 1950 | 10001 | A | 2892 | 91 | 598 | LKNRRRSRPSIRQSIGSTSVSRWLSTLFY LDHTADVQ*V*REFIPLKPRQ*ED*MFQS WLHAWGDTLEAEFEQCAMAMFGYMTD TGTVEPLQTVETQGDQLSLFHFLE EWLYKFSADEFFIPGWGEEFSLSKHPQ TEVKAITYSAMQVYNEENPEVFVIIDI |
| 1951 | 10002 | A | 2893 | 359 | 938 | IYFFRLHAWGDTLEAEFEQCAMAMFGY MTDTGTVEPLQTVETVE*QGL*QVLLF HFWDWLYKFSADEFFIPGKLCIAVF*K RL*RFQAVAYACNPSTLGRGRWIT*GQ EFETSLTNKEVKVLSIDQRNFKLRFNGW GEEFSLSKHPQGTVEVKAITYSAMQVYNE ENPGSCDHWTFKTQKIKRLPTGKK |
| 1952 | 10003 | A | 2894 | 220 | 345 | LKKEKSLMEKHFF*QTDSSVSNLEKNHE PSDIVNSLQWAMVS |
| 1953 | 10004 | A | 2895 | 1 | 281 | |
| 1954 | 10005 | A | 2896 | 83 | 425 | |
| 1955 | 10006 | A | 2897 | 1 | 3600 | |
| 1956 | 10007 | A | 2898 | 1 | 197 | |
| 1957 | 10008 | A | 2899 | 1 | 963 | |
| 1958 | 10009 | A | 29 | 376 | 610 | FPAFWESQVRWIASASGVQDQDPQYGEI LFLKLQKLGGHGG/IR*EDHLSLGGQC KEPRLYHCTPAWVTEHYLVSKK |
| 1959 | 10010 | A | 290 | 1 | 366 | FPNSSRLJWPECNRIKEESLVASPGSFCK PHLDLALGLGL/GVGLMVELGLKLGLFL GLGFDLGVGLGIGL/GVKLGLSDGY/GLG FRLGLGL*AGLVGLGIRVGLKPLGLEI FVGLLICICI |
| 1960 | 10011 | A | 2900 | 49 | 247 | DLTRNHSPLQTVHDVRWFMIFQV*YRR IKFVKRNASPSGI*NII*TNITFVCYK*IFR YKNMHI |
| 1961 | 10012 | A | 2901 | 1066 | 1768 | NPQSSSESGSR*DFPRLTVTNRLLVQRSE VTQAPGQYTVDEGHGCTFIQATLKLYN VLLPKKASGFLSLSLEISKELDFC*PRQ VNLQYTGIRNKSMMVVIDVKMLSGFITPN PCHPIEELNKGQSD*E*SKNDPCSFY LENVFGQPDSPFFC*AEQPLCSTFGPGP SHGLTDYEEKEYALAFYQHRTVVPVSE *DKAITRVGEAISCNKLILLYQTVKKIM NHLTS |
| 1962 | 10013 | A | 2902 | 620 | 1124 | ETPAPCLQAWVPQACREGPLAFRELLGG VLALSTPGERCSSVSEFETRARCTQ/PC WGSP*KFLSPPHAKPAITLRPELKEAFWP APSLGPPGGLSTPPSGIPCPCQCGHVA LCRGLRPSW*TE*PVCWKMPRCPEKL PGIFGNETYLVPIVNWPTGSFLSTY |
| 1963 | 10014 | A | 2903 | 2 | 399 | WKESQGRCEW*VARGL*ADLT*GFHWH LPGAPPWGLLTGGGQGRGHGRGGWA LSGRPPRGFHWLPGAPPWGLLTGGG QGRGHGRGGWALSIPRLQSFQVWA ESPLPQLPWGCVAGISVHTGVSWLP |

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| 1964 | 10013 | A | 2904 | 73 | 867 | GRAEQTSDFHFFASTSACSHNLTMSCPN YCSGNSNSGSLRSTRHPLTSDLCPTSVS CGDVLVLPSTSQDHTWVTDNCQETCGE PTSCQPVHCETGNLETSCGS/SHC/CTTCP GPCQGSFLPASFFSSCLPVSCRTTEVC/ RPAAVRPLRAVVQ*FTSP*GDCVQAQCLR POFCLSKSCQPNLLTSGCQPSCLA YRP QSLHVVSSSLRPLGLFSGCQPLTHVFST VSSH LALEHGSFNICFLQSSILLHRSSRA VCSAFL |
| 1965 | 10016 | A | 2905 | 1 | 478 | |
| 1966 | 10017 | A | 2906 | 800 | 1209 | LFSSGAVPORTSPHQAPKNM/QTSGRLS/ NVAPPCLIRKNPPSARNGVHET*CPNSL NSNQQLVDLKLTVDGLEKRDYFYSKL RDIELCQEHESENSFVSIIGILYATEEG FAPPEDEIEEHQEQEDQDEY |
| 1967 | 10018 | A | 2907 | 1 | 3961 | MSSKHLKSEQIKDQIRVPVISLPIKHSQAQ EEQLSSTAVCSCPARVFCVTKVVAVFQ MWMLHDLVQMVPRSLQWLPHITLFSN PLILYHSHLESAPFAEQRECKLAYMPVS SASAHLLLLQAFDFNLVSLSLARNML ANSASVRIKLGKKVNVNDCTHEADVYI ENGIIQQVGRELMIRWGQKLVIPGGIDT STHFHQTFMNAATCVDFFYHGTVMILLF AKGGFLGFFILLGLLQTRLMASLAKS D |
| 1968 | 10019 | A | 2908 | 48 | 308 | NPRCQPGGSRFVSSWCSVPPEAGGG*RK EPGMRGAGYKQRMGS*SKGPF AFIMPF PRPRPGFVLPFPHLPDLNKGPHFSQKKK KK |
| 1969 | 10020 | A | 2909 | 3 | 214 | |
| 1970 | 10021 | A | 291 | 49 | 418 | FMINPPNQVGRYRNINLTNIYQKPLAP VIL/HGEIFKFLTGTGVTQRYPLSLPFKV FLAALDRK*REGAGEEVNGENKRIKLSF VSDMIVYVENSKEKNGQLLEMRGICKT ATKLQKL |
| 1971 | 10022 | A | 2910 | 312 | 387 | |
| 1972 | 10023 | A | 2911 | 3 | 216 | NCLLRPKNKSVRWGPGAGAAALRFPSPA ALGAGSRACSVPPAAPAQTPRPQVSAPA WGPGR AARGSRMERRMKAGYLDQOV PYTFSSKSPNGRLAR/TLIGPLGKLM DP GSLPLDSEDLFQDLSHFOETWLAEAAQV PDSDEQFVPDFHSENLAHSPTRIKKEP QSPRTDPALSCSRKPLPYHHGECQLYSS AYDPPRIANQVPCPWCPLDSRPSPFPG QSNGIS*DPLAPSPTLAMGTSGNIAPSS SPWDICHSFTSQGG/APG/HPSQAPYQH LSEPCPPYPQSQGQYHDPLYGTGGAS QAVGTRGGSGMAQRYPGAGVVIKQE QTFDAYSDVTCASMYLHTEFGSPSP GDGAMGYGYEKLPRFPDDVCVVP/KEF EGDIKQEGVGAFREGPPYQRRGALQLW QFLVALLDDPTNAHFIAWTRGMEEKLI EPEEVARLWGIQKNRPAMNYDKLSRSL RYYYEKGIMQKVAGERYVYKFVCEPEA LFLAFLPDNQRPALKAEFDRPVS EEDTVF LSHLNDESPA*PFYSGLAPRSPVRAPGHA RYPRIQPRRPLRSRPLGAPAVRREG AAGWGGG |
| 1973 | 10024 | A | 2912 | 119 | 444 | GFGVGTITPALTCPVTPSYSPKARPS*/EL EPSPRCQPCQTLGPQAEQNGMSSAFSL ASPPSKQPLMANRCCCVPRSRHLGCIQ NRLGFWD SREERG DATWVS VSD |

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| 1974 | 10025 | A | 2915 | 1 | 574 | GADGGGAFRLSGPQP*APPGSSALMMP SSCPWRTGALGPSAGSRALGRCTSSVG PGSRWLRTSSPGCAQYNLEDEDGGAQ ASPEPDGGVGTIRLGGPIAE*TSIRSFVY LQHIIHAAAPSATTPTAAAGFNTL*SRRT AECWCPFS*CSCLGPGADPGRRGNWRR PPLRCLROQSSSCRAFLLLVPGV |
| 1975 | 10026 | A | 2916 | 355 | 511 | LFLETESCFVAQAGARWAVITHCSLKL/L GPCNPPISAL*VARTTGMSSHTEP |
| 1976 | 10027 | A | 2917 | 1815 | 2152 | INKEMSGQARWLTPVIPALWEVKVVDH LRPGVRDHPQGQQSETPVSTTTQK*ARY GGMCL*S*LLRRLTQQNHLNQGGRCSE LRSRYCTPAWARQSKTSSQEKKEKEM PW |
| 1977 | 10028 | A | 2918 | 315 | 480 | |
| 1978 | 10029 | A | 2919 | 1 | 1845 | |
| 1979 | 10030 | A | 292 | 5 | 377 | FMINPPNQVGRYRNINILTTNISQKPLAP VIL/HGEIFKIFLTGIGVQTRYPLSPLEFKV FLAALDRK*REGAGEEVNGIENKRIKLSF VSDMIVVYVENSKEKNGLLEMLRGLSK NATKLQKLI |
| 1980 | 10031 | A | 2920 | 407 | 802 | |
| 1981 | 10032 | A | 2921 | 914 | 1134 | QESLLLOFTKSSSCPSETTSARTLLSILLS AFWAKFPNKLGGSKLSHIIFSSSDPSKA VPTSAYYPVKSLPH |
| 1982 | 10033 | A | 2922 | 1 | 447 | |
| 1983 | 10034 | A | 2923 | 218 | 544 | SGFSLSLRGSISFSL/CFKVGMCVTYPRCY C*SVPVP*KPLIKPGWVSELKPMNWASC SRTLASFLQAARSHPWTPMKMETMEQ SKLRSQPCPKAAGAVDPRVAVHGT |
| 1984 | 10035 | A | 2924 | 3 | 260 | |
| 1985 | 10036 | A | 2925 | 1 | 534 | |
| 1986 | 10037 | A | 2926 | 198 | 562 | LKCGKQWSDPITSQTESQLLGSSQQOL HQQRHLQGP*K*NRDSPLCFLSSCPKPK TYTNRHILLP/SSSKSLCKFL*PA*ISPQKM GFSLSQSVCKFSKLLCSASLIKLFKAFNSI QVTS |
| 1987 | 10038 | A | 2927 | 72 | 270 | |
| 1988 | 10039 | A | 2928 | 325 | 535 | |
| 1989 | 10040 | A | 2929 | 492 | 696 | |
| 1990 | 10041 | A | 293 | 346 | 489 | QLQAMAIFEYLKKTFLRPGTVPHSCNPS TLAGRGGWIT*GQEEASAP |
| 1991 | 10042 | A | 2930 | 822 | 1759 | SSAEPSPSSPAFSPQOTAAAGAPLCAVS PMAASGAMAKHEQILVLDPPFDLKFKG DG*VFIRPEQYTYT*KWCKRSKRIHGFR PUFTDVVTTLNKLKRNPSDRKVCFKYKTT VPS/RRYCVR/PNSGNDPGSTVTVSML QPFDYDPNERSKHKFMVQTFIAPPNTSD MEAVV/WKEAKPDELMDSKLRCVFMFP NENDKLNDEMEFSKAYPLNASKQDGMF PKPHSVSLANDTETRKLMECKRLQGMF MKLSEENHLRLDEGLRLRKVAHSDKPG STSTASFRDNYTSP/LPSLLVIAAIFIGF LGKFL |
| 1992 | 10043 | A | 2931 | 2 | 417 | FVAQQLQGDLSLHFMQALYQGHFPIEVK HYLSQWIESQA/WNTYDRCPMELVRCIR HILYNEQRLVREANNNGSSPAGSLADAMS QKHLQINQTFEELRLVTQDTENELKKLQ QTQEYFIHQYQESLRIQAQFGLAQLSPQ |
| 1993 | 10044 | A | 2932 | 1 | 855 | |
| 1994 | 10045 | A | 2933 | 1 | 810 | |

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| 1995 | 10046 | A | 2934 | 224 | 2606 | TMAYVWQAQOQLOGEALHQMQUALYGOH FPIEVHRHLSQWIESQA WDSVDLNPQE NIKATQLLEGLVQELQKKAHQVQGEDGF LLKIKLGHYATQLQNTYDRCPMELVRCI RHILYNEQRLVREANNSSPAGSLADAM SQKHLQINQTFEELRLVTDENELKKL QOTQOYFIHQVESLRQAQFGPLAQLSP QERLSRETALQKQKQVSLAOWLQREAO LQQYRVLPPEKHQKTLQLLRKQQTILD DELQWKKRQQLAGNGGPPGSLDLVQS WCEKLAELIHWQNRQQRRAEHLCCQLPIP GPVEEMLAEVNATIDHIALVSTFIHEK QPPQVLKTQTKFAATVRLVGGKLNH MNPPOVKATHISEQQAQSLKKNENTRND YSGEILNCCVMMEYHQATGILSAHFRN MSLKRIKRSDRRGAESVTEKFTIN.FESQ FSVGGNELVPQVKTLSPVVIVHGSQ DNNATATVLWADNAFLQEPGRVPFAVP DKVLWPQCEALNMKFAEVQSNRGLT KENLVFLAQLFNNSSSHLEDYSGLSVS WSQFNRENLPGRNYTFWQWFDGVMVEV LKKHLKPHWNDGPIGVTFVQQAHDLI NKPDGTFLLRFSDEIGGTAWKFDSE RMFWNLMPFTTRDFIRSADRLGDLNY LIYVFPDRPKDVVYSKYTPVPCEATA KS/VDGYVKPQKQVPEFVNASADAG GGSATYMDQAQSPACV/PQAHYNNMYP QNPD*VLDITDGDLEDTMDVARRVEE L/LGRPMDSQWIPHAQS |
| 1996 | 10047 | B | 2935 | 123 | 219 | XPPTGMTMDKSELVQKAKLAEQAERYD DMAAA* |
| 1997 | 10048 | A | 2936 | 1 | 1815 | |
| 1998 | 10049 | A | 2937 | 1 | 510 | |
| 1999 | 10050 | A | 2938 | 107 | 961 | VVGLGRKRSRSGASLGRVFPVPCSPPTG MTMDKSELVQKAKLAEQAERYDDMAC SSERHIVTEQGHRELQPKNRNLSVAYK NVVVGARRFLPGRVISSIEHENREGMKKK QQMGKVEYP*EDRRQNLQDICK*CFWEL LDKYLIPN/AVTQPE\$*GVLL*KLKGGYF RYLSEVAS*DNKQTTVSNSQGFREHF EISKEMQPTHPRLGLALNFSVFYEIL NSPEKACSLAKTAFDEAIAELDTLNEESY KDSTLIMQLLRDNLTLWTSENQGDGDD AGEGEN |
| 2000 | 10051 | A | 2939 | 208 | 1178 | EGRGHLARSFARKGLCSLPQSHGRVSRD LGRYKCKILPRLWIEKQOEHWITWSQGM TMDKSELVQKAKLAEQAERYDDMAAA MKA/VTEQGHLSNEERALLSVAYKNVY GARRSSWRVISSIEQKTERNEKKQQ/MG KEYREKIEAELQDQCNVDFELLEQISLP NATQPRKVKVTLLEK*KGDYFWYLF*K WQS*ROQTQTCVETQQS/PRKQFEISK KEMQPTHPRLGLAPKFPQSFYIEIPKL PLKKA*AWAKTALCFRHFDSNLLNL DTLEWKSLIKDSISDQWLLRDNLTW DIRKTRGDEGDAGEGEN |
| 2001 | 10052 | C | 294 | 140 | 172 | |
| 2002 | 10053 | A | 2940 | 1 | 459 | IEIHIKCGGIPAVLAAPAMGLEFLDLVS QPSRAYYIFAKKNGIPLERTVLDVKGQ HKSKEFLQINSLGKLP/LKDGDFILTE/SA NRSVYLQGGCWHTIMEFRSKCAEGPA KRSAILYLSCKYQTFDHWYPSDLQAR ARVHEYLWHAD |
| 2003 | 10054 | A | 2941 | 2 | 310 | |
| 2004 | 10055 | A | 2942 | 205 | 454 | |

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| 2005 | 10056 | A | 2943 | 5 | 437 | AQESRDCGDHDRATALQFGQOSEILLQ RLPPENAVD*VALEGSQPI*TLACLSCK YQTPDHWYPSDLQARARVHEYLQWHA DCIRGTFGIPLWVQVRRANLPLFSFLAP VPSLQHLVKLCTDKTL SVLGASILRCSI HTS |
| 2006 | 10057 | B | 2944 | 307 | 447 | XSAILIYLSCKYQTPDHWYPSDLQARAR VHEYLQWHADCIRGTFGIPL* |
| 2007 | 10058 | A | 2945 | 2 | 384 | |
| 2008 | 10059 | A | 2946 | 1 | 1278 | MPGLGFRKKGGSRTVIPASRGCGLPAPI LCTKWELPLSGSSRCLAAAAQGTIVWT AESSSLTPAFQSRGWGLIPYPARRDPAT AAAH TALSAFTAIPAVLAAPAMGLELFLA DLVSQPSRAVYIFAKKNGIPLERLTVDLV KGQHKSEFLQINSI.GKLPILKDGDFILT ESLAILIYLSCKYQTA/DH/WYPSDLQGF GARVHEVPWA WHADLHPVGTIFYYP WGVQGVWGHSLGVQVPEEKVGTQTRT AMDQALQWLEDKFLGDRPFLAGQQVTL ADLMAL.EGS*CKPVALGYELFEGRPLA AAWRRIRVEAFLGAELCQEA/HTSILSIL EQAAKKTLPITPSPAEAYQAMLLRN.RPGS PEGSGMGAKESNKDSFCYLLAPFYL.SLL PQSLLSKLQCEALHRQRHSSVLWQVLLL LRCKHT |
| 2009 | 10060 | A | 2947 | 298 | 456 | NIYQLE*K*KFKNGQVWLGAVVRACNPST LGGR/WIPWGQEFGLTSLANMVKPRLY |
| 2010 | 10061 | A | 2948 | 59 | 190 | ARSFHSDAPQGHLECHWCPGVLEL*GHR NPDTCPHLEQISSK |
| 2011 | 10062 | A | 2949 | 319 | 460 | HFSYIHWFYTEKYKIKITHQDYQLQKFIH/ CTEEKHAYH*PNKILFIT |
| 2012 | 10063 | A | 295 | 2008 | 2438 | WLSLHRPGRPLLWHMVRVPPPLTGL*SSP HDSVGPQPKWKSPTTFSNPDPPENVQN HPGKPVAKSPFVQQRNGH/PPKR/PTWGS STCWGEVIRSGSPPTT/KPVWPTSCFEFS VLPPDEDTVFPHPFVSLILFAISFALVCG D |
| 2013 | 10064 | A | 2950 | 78 | 3703 | FQELGAREPFGNMYDADEDMQYDEDD DEITPDLWQEAACWIVISSYFDEKGLVRQ QLDSFDEFIQMSVQRIVEDAPIDLQAEA QHASGEVEEPYRLYLFQEIYLSKPTHW ERDGAPEMMPNEARLNRILTYAPLYV DITKTVIKEGEEQLQTQHQKTFIGKIPIML RSTYCLLNGLTRDRDLCENECSPD/GR YFIINNGSEKVLIAQRKMATNTSFCRLQK TDSKYAYTGEGRSCLENSRTPTIWWVS |
| 2014 | 10065 | C | 2951 | 162 | 293 | MGNLLKVLCTDLEQGFNFLLDFENAOQ TESEKEIYNQVNL* |
| 2015 | 10066 | A | 2952 | 286 | 1327 | AGAKFFP*F*KVADAQPTSESEKIYNQV NVVLKDAEGILEDQSYRGAGHERIAI QHPADEKVAKKKAWGAVVPLVGLKLLK FVEFSQRLEAALRGLLGALTSTPYSTQTH LEREQALAKQFAELHFTLRFDELKMTN PAIQNDFSYYRRLTSRMRRNNYPAGEEN EVANELANRMSLFYAEATPMLKTLSDA TTKFVSENKLPIENTTDCLSMTASVCR VMAAGNTVEYSQILQNEETVSFLSWRAM VGCS*YSYDHRITSSGEAFCLKLPKFDMK GCIVLKDQPPNSVEGLLK/SLRYTTKH LEWMRLPPSKLKSMLPTILGIKHPAYDR RQYSAMTENAVF |
| 2016 | 10067 | A | 2953 | 75 | 478 | AVKMCDFT*QDTA*FKEAFLFDRDTGDG KILYSQCGDPKSDENNVKVLDFEHLF MLQTVAKNKDQGT*DYVEGLRVFDFKE GNGTVMGAEIRHVLVTLGEKMTTEEVEQ MLVAGHEDSNGCINYEELVRMVLNG |
| 2017 | 10068 | A | 2954 | 2 | 343 | |

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| 2018 | 10069 | A | 2955 | 34 | 353 | |
| 2019 | 10070 | A | 2956 | 2 | 303 | |
| 2020 | 10071 | A | 2957 | 1 | 999 | |
| 2021 | 10072 | A | 2958 | 255 | 528 | ARYKIHTGKGTDSGETGKVLSHSAPCGR CSRPWARHPDRSMPHKRFIVDTNQLSS CPATSISSSSVNVLPDRCDFPEDQAEFFK EAFQLFDRITGDGKILYSQCGDVMRALG QNPTHAEVILKVLGNPKSDEMNVKVLVD FEHFLPMLQTVAKNQDPGSPMGFMSKE LRVYFYKVEGNGTVMGAEIRHVLVTPG* KLTEEEVEMLVAGHEDSNGCINYEAFV RHTPVGVTPGWAGASSAWC |
| 2022 | 10073 | A | 2959 | 26 | 518 | AVKMCDFTEDDQTAEFKEAFQLD/RKPG DGKIPCTAQCGDVMRALGQNPPLNAEIV LKAPGEPSPRSDMSVKEHDCHEFLHIL QTVVAQNGQGTQYEDYVEDFRVFDKEG NGTWMGAIEIRHVLVTLGED*QRKKV EMLVAG*RTANGLVSNYEELVRMVLN G |
| 2023 | 10074 | C | 296 | 165 | 290 | MCHIRAGFASLSAGQFIHFLVTPMAAPRI SAVCGPESRHQ* |
| 2024 | 10075 | A | 2960 | 453 | 744 | |
| 2025 | 10076 | A | 2961 | 736 | 1062 | |
| 2026 | 10077 | A | 2962 | 295 | 782 | PILCNPDGWWYVVKQSEISKESEQEM DARPKLDLGFKEGQTIKLCIGNITNKKGG ASKPRTARGGLSLPPPP*GKVTIPPPSS /VKLPSTNHVTPSPKSNHGGSDAIDILA DLDSPAPVTPPTPVS/SN/DL/WGDFS TASSVPNQAPQPSN/WVQF |
| 2027 | 10078 | A | 2963 | 192 | 324 | |
| 2028 | 10079 | A | 2964 | 1 | 1044 | |
| 2029 | 10080 | A | 2965 | 1 | 811 | |
| 2030 | 10081 | A | 2966 | 1 | 750 | |
| 2031 | 10082 | A | 2967 | 493 | 1946 | |
| 2032 | 10083 | A | 2968 | 539 | 1215 | |
| 2033 | 10084 | A | 2969 | 414 | 1762 | |
| 2034 | 10085 | A | 297 | 883 | 1095 | GSV*QDPGQHGKPFSL*LNLAERGG GHL*SQLRLRLRQENHLNPGGCCSELR SRHCTPAWATRAKL |
| 2035 | 10086 | A | 2970 | 449 | 1305 | SKSRMSAEVHQVEEALDTEKEMILLFL CRDVAIDVTPPNVRDLNLRERGKLS VGDLAELLYRVRFDLLKRLKMDRKA VETILLRNPHLVSDYVLMAEIGEDLDK SDVSSLIFLMDYMGGRGKISKEKSLDL VVELEKLN/VAPDQLDLEKCLKNHRI DLKTKIQKYQSVQAGTYSYRNVLQAAI QKSLKDPNNFRHLNGRSKEQLKEQLG AQQEPVKKSIQSEAFLPQSPIERYKMK SKPLGNLPLIDWHWALRTELSFEDITTS LGY |
| 2036 | 10087 | A | 2971 | 473 | 1164 | SKSRMSAEVHQVEEALDTEKEMILLFL CRDVAIDVTPPNVRDLNLRERGKLS VGDLAELLYRVRFDLLKRLKMDRKA VETPLFKDPLVSDYVLMAEIGEDLDK SDVSSLIFLMDYMGGRGKISKEKSLDL VVELEKLN/VAPDQLDLEKCLKNIP QK*P*RQSKQKYQSVQAGTYSYRNVLA QAANQKSLKDPNNFRMITPAHCPDL KLNLCNSM |
| 2037 | 10088 | A | 2972 | 482 | 692 | EKPL*SYLSFFHLEMGSHSIPRLVCSGV IVAHCSLQLLGSDDVPTS/ASR*GLTGSH TITPSLGLFLN |
| 2038 | 10089 | A | 2973 | 1 | 358 | AQLVEFGHEHSMAPPAHFRALLYHPGTAT LVPHFASISQHSPPWGNAR/GP*RVQR HLTAPRSPHPRFRHKPGKDPRENPSRW PEVPSPQTHVVPQGAAWDTVNTTYCK NRSTKPDQ |

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| 2039 | 10090 | A | 2978 | 136 | 500 | GTLPNSSLCESNNGHPRQGRGSCPSRY TGVPSPLSRIOQWIRLHPPSPVTRPSY SSPOASASVGLRGHPAQITWTTCSRSPV SPVRFSSGSDGEKRLGQSCPHGNDPGAA CISRPYYA |
| 2040 | 10091 | A | 2979 | 242 | 9991 | FKLELHQESDMEFNNTOEDVQERLAY AEQLVVELKDIIROKDVQLQKKDEALQE ERKAADNKKIKLKLHAKAKLTSLNKYIE EMKAQGGTVLPTEPQSEELSKHDKSST EEEMEIEKIKHLQKEELISTLQAQLTQ AQAEQPAQSSSTEMEFVMMKQQLQKEKE EFISTLQAQLSQTQAEQAAQLSSMQQVV REKDAFETQVRLHEDELLQLVTQADVE TEMQOKLRLVLRKLEHEESLVGRAQV VDLLQ |
| 2041 | 10092 | B | 298 | 191 | 494 | MKLKR.GAGSCKKPGSSWGPAVGEFHS VQNICARREYQRQDYMDAMAEKQKLD AEFQKRLEKNKIAAEEQTAKRRKKRQKL KEKKLLAKMKLEQKKQEGPX* |
| 2042 | 10093 | A | 2980 | 3 | 211 | |
| 2043 | 10094 | A | 2981 | 1 | 519 | |
| 2044 | 10095 | A | 2982 | 291 | 686 | GLGTAYISQDVWKSlyVQAEVCCRGR VFLVCSCGSCWSKSSRCEPPYAVLSIQVE AAHMHIEWCRDSRDLPEWSSCSLLE KDPFSGFQTDQPKHLNTNFKSDKGDTF YPWTQNSGAGHGLGRQFSLV |
| 2045 | 10096 | A | 2983 | 1 | 639 | |
| 2046 | 10097 | A | 2984 | 2 | 423 | GFLVLLTSRMKRLTLAKQRHILSVDPK LRRRSRTGKAAPFWCLIIAGTPLIHPRFK GVRPCRDACLGPSPLAASPAFLGEGQEL ATSARNLTTRPNACSPGFLSLRVHLCG TPLEI*PFGQMPAAQDSS*AVSICAGPH WKSDCSTHLAGITPRAPGILAQGS |
| 2047 | 10098 | C | 2985 | 80 | 106 | MRMKFGLD* |
| 2048 | 10099 | C | 2986 | 259 | 531 | MSPAHNKFNQTEPQRPPIPEPPPGACY KCQKSGHQAKECLQPRIPKPRPICAGPH WKLDCTHLASTPRAPGTLAGQSLTASQ IFLA* |
| 2049 | 10100 | A | 2987 | 3 | 505 | |
| 2050 | 10101 | A | 2988 | 1 | 1056 | |
| 2051 | 10102 | A | 2989 | 1 | 1482 | |
| 2052 | 10103 | A | 299 | 2 | 478 | SGRLPWLAQPPPRCDHRGPRKSRSSSS PRMRREEQKLKLERLMKNPDKAVPIPEK MSEWAPRPPEFVRDVMGSSAGAGSGSE FHVYRHLRRREYQRQDYMDAMAEKQK LDAEFQKRLEKNKIAAEEQTAKRRKK/R PQS**KKNLLAKMKLEQKKQEG |
| 2053 | 10104 | A | 2990 | 399 | 567 | ACYKCWKSghrvKECLQRPKPCPC AGPH*RSDCSTHLAATPRAPGTLAGSL |
| 2054 | 10105 | A | 2991 | 1 | 468 | |
| 2055 | 10106 | A | 2992 | 1 | 984 | |
| 2056 | 10107 | A | 2993 | 1 | 900 | |
| 2057 | 10108 | A | 2994 | 1 | 522 | |
| 2058 | 10109 | A | 2995 | 3 | 1150 | |
| 2059 | 10110 | A | 2996 | 3 | 500 | LEGASYGETKADVAEGKSQKKATEWRS QQRKKEETSQKDKCRTNQLSVKRT NQLSVIWTNQDVGYSANPLMAAEPQAQ AVKLGWRPSPKPHIGDKSVSFWLLWMG SVQQGQKIGP/PSQGNACRPRNSS*SHVP CGGGPHWKLDCTHLAATPRAPGTLAG GSL |

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| 2060 | 10111 | A | 2997 | 3 | 603 | GHSRPRNWSQWSPRFLWLEAHRPSPGSP DSAE LR SQVSDCLGTSRHGTGALFLALG IYAASCYVARFIRVRPHRDAYSLOGRLS DHSPITFQCQQTQGRLPWSFLTSGKSRF SGEGATTSPAHNKQFQPEQWGPFPPEP PTGACYTCRKS GHWAKECPQARIPPKPH PICVGP H*KSDCS THLAATPRAPGTLAQG SL |
| 2061 | 10112 | A | 2998 | 1 | 669 | |
| 2062 | 10113 | A | 2999 | 1 | 762 | |
| 2063 | 10114 | A | 3 | 32 | 474 | LYALRNQIKPPPHVTGGQ*OKOERTKPA WRP RP/GPPPFIALIGFCSSVPAWVEL RVEPPGGHWPLSP LGEVRGEWRRLPSGL AS/VGQWLVPSP EGGGGG WAGSPQVS GGWPPSAHLRNPLSLGDILPAQHPALS PGGPKLCG |
| 2064 | 10115 | A | 30 | 147 | 766 | GALHLIRKGSPLHGQAHKHVAQGRGIL SRVHRPTHVHTQGRKATRLGLCSAHR APHPSFLPLVPVCCS/WHHCETPRCPPLL PCPPSSGASTSR TASSPVLST D*PYLSE TEEQVSPGLTHKASLEPRSDSDAKTSSH PRDWPHPMVDCAAALSWTOPLWMFCG SRLAFHDAPAPAHMRAIWAARAARP GPHLGLAAASC |
| 2065 | 10116 | A | 300 | 72 | 409 | VCSETGFILYCRN/DCKWDAPILETVWFF VRS*TLDMNCTPAIPFLFTYPLEMYGHA Y*MTCTRIFMAALFIATNQKSPKCSINSI HATKYIYIAMKLIQLYYPVATWINKVF |
| 2066 | 10117 | A | 3000 | 1 | 519 | |
| 2067 | 10118 | A | 3001 | 1202 | 1315 | |
| 2068 | 10119 | A | 3002 | 1 | 930 | |
| 2069 | 10120 | A | 3003 | 132 | 248 | |
| 2070 | 10121 | A | 3004 | 3 | 439 | |
| 2071 | 10122 | A | 3005 | 1 | 357 | |
| 2072 | 10123 | A | 3006 | 1 | 765 | |
| 2073 | 10124 | A | 3007 | 1 | 1434 | SVAFVFACPAVDYLKISWELQGDDEEQD GLRNMIWQTLQKTKDYEDVRIONAINI AQGASEAIGQRQSSAAKPRRSKGESVRE PWARVPGALGVAARKYQKMKGIEIKRR ERLKCGAKIERRKRLKDREVOEESKRP LTGFEIPEPKVTVM PKNQSF TGGSEVSIM CSATGYPKPIAWTVNDMFVGS HRYR MTSDGTLFIKNAAPKDAGIYGCLAKAPK LMVVQSELLVALGDITVMECKTSGIPPP QVKWFGDLELRPT/CFLLSILAP/PLQS LP SLNFNSFHF LDFLAATPRAPGTLAQG SLTDSFPDLLGLAAED |
| 2074 | 10125 | A | 3008 | 166 | 421 | RPRSERLLWGTSP LSCALTL*GDPPTTSG PQTNLQKEHLTNFKSGPHWKMDCP THP AATPRAPGTLAQGSLTDSFPDLLGSAAE D |
| 2075 | 10126 | A | 3009 | 1 | 434 | |
| 2076 | 10127 | A | 301 | 92 | 617 | DRVLSLLPRLECSG SILAHNCNCLP/GFK RFSICLSLSSWDYRHTPPCPV/*LVELVE MGRIIFSOAKSRTL/TGDP PASASOKCW NYRRDNLAWLASALNKVINLLKSEIPSF FLVOLSGFSRTL LQGLNFNFYHTLVYS NNLPIMQITFQDFGRISGKPPFGIMLCN REILYIM |

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| 2077 | 10128 | A | 3010 | 1478 | 2240 | WQVPLSWGRGKYPTSPSPFLAASPTFL GQQQVPLNPFSTLSGKSRLFAGASTPQ PLLLHPQRQVPLSWGRGKYPTSPSPSPA ASPAFLGQQQVPLNPFSTLSGKSRLFPG QETPNRFLFPHNLLSLHNPFLFPHDLLS LCPNPLFCPLNPFSAFLGKNPPLLRVST LFSGLASFTMGACYTCQKSGHWAKECP QPGIPPKPCPSVGP*KSDCSTHLAATPG APGTLAQ/GLIDSFPDLLGLAAED |
| 2078 | 10129 | A | 3011 | 1 | 624 | |
| 2079 | 10130 | A | 3012 | 321 | 512 | |
| 2080 | 10131 | A | 3013 | 1005 | 1251 | KGGWSQRHSQGCYTCRKSQHWAKEC POPQIPPKPRPCVGP*KSDCSTHLAANP RAPGTLAQGSLTDSFPDLLGLAAED |
| 2081 | 10132 | C | 3014 | 18 | 56 | MAINSIRSLQLM* |
| 2082 | 10133 | A | 3015 | 188 | 364 | |
| 2083 | 10134 | A | 3016 | 602 | 2459 | FWGEGEKATAFLICNLACGLRCPVDMN SVQSDSNEEDYDPNCEKEKEEEDDPA GDIEDYVWGVASDVQQGADAFDPEE YQFTCLTYKESEGALNEHMTSLSFLSL KVSHSSWLNLYLVNFHWQVSEILDRYK SNSAQLLVEARVQPNP/SQKHVPTSHPPH H/CAGCGMQVCAKRENLL/SLWACQL*F CRSCWEQHCSVLVKDQGVGVSCMA/ Q/DCPLRNTSGTFVFP/LLPNEEFEEKY RRYLFRDYVESHYQLQ/CPGADCPM/V IRVQEPRA/RARVQCNRCNEVF/CFKCR QMYHAPTDCATNRKWLTKLQDDSETA NYISAHTKDCPKCNICEKDGGINHFM QCSKCKHDFCWMCLGDWKTGSEYYE CSRYKENPDVNSQQAQA/RREALKKY LFYFERWENHNKSLQEAQTYQRIHEKI QERVMMNLGTW/DWQYLQNAKFFGQ GSFSSLLQCRYTLQYTYPYAYYMESG PRKKLFEYQQAQLEAEIENLSWKIVERA DSYDRGDLENPDIAITEPTGGTNPCLKD FHDTLSDWDVDPGVRKISLARSRAAH TACLAGSAFHPQATAQGP/PERHWQH LLVDFCFL/LSLVSTQGRRPC |
| 2084 | 10135 | A | 3017 | 103 | 769 | GPCCPIHQILILFQCFKHFSGLFCLQCK LMMPKSLVMEYLAHPSLGLAVGVAC GMCLGWSLRVCFGMPLKSKTSKTHTD TSEASILGRQPGSPG*FLVVRN*L*RWG KGERGCPSSASHAAVSSPTKQISKKSPE MAQNNGEYWWASPKVGGSKVPDEETLI ALLAHAKMLGLTVSLIQDAGRTOAPG SQTVLIGPGPADLIDKVTGHLKLY |
| 2085 | 10136 | A | 3018 | 99 | 478 | |
| 2086 | 10137 | A | 3019 | 2 | 87 | |
| 2087 | 10138 | A | 302 | 367 | 619 | ETRCRGHP/PRDREPPS*PGIOSSPGVP/PS RPSNKAYPRLPIRPQPPGLSFR/STPRPSP KPPCPPHIGRHVQTKTS/SAVSILS |
| 2088 | 10139 | A | 3020 | 1 | 921 | |

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| 2089 | 10140 | A | 3021 | 1 | 2203 | MGGASARPAAPSGRWGVPLGRPFWEV MSPSARPPRLGGVFNSSLRTHGDDDDGG FVEQRRGKGDSGQLGLRIKLRVRVVSFV QLVMAFDKAEPLSSPKVLVLTVTTRATG GVGLQTLRRLQERPGIGQLGALCLICTVR LCGHEEMTSTFNPRECKLSKQEGQNYGF FLRIEKDTEGHLVRVVEKCSPEAKAGLQ DGDRLVRLINGVFVDKEHMQVVDLVRK SGNSVTLLVLDGDSYEKA VKTRVDLKE GGSQKEQGLSDNLSPVMNGGVQTWTQ PRLCYLVKEGGSYGFSLKTQVQKKG VY MTDITPQGVAMRAGVLADHLEJVNGE NVEDASHEEVVEKVRGPRRVGYGFDR QQMAAALQKRGLTVKNQTESNNNINK KRPHKNPIORSAASKIEELEKNYFKIQYG SKKEPVQVKT TVSKKNAGGITLPDFKL YYKVTVTKTACSRYPHWKMNL CVLILL /VFPMPVFLQALYFIVSNIRLLHKQRLLF SCLLWLTMYFFWKLGDPFPLSPKHGIL SIEQLSRVGVIGVTLMLLSGFGAVNCP YTYSYFLRNVTDILALERRLLQTM MHISKKRLRGPVGVGFLIYSPVQIAE DLTLIQEVD ALEELSRQLFLETADLYAT KERIEYSKTFKGKYFNFLGYFFSYCVW KIFMVKFWSQHISFILVGHIVTSIRGLLITL TKFFYAISSSKSSNVIVLLAQIMGMVYFV SS |
| 2090 | 10141 | A | 3022 | 2 | 215 | |
| 2091 | 10142 | A | 3023 | 50 | 1598 | GGLWPORAVASGSGKWROEPLSHFAMS FLIDSSIMITSQLFFGFGWLFMRQLFKD YEIRQYVVQVIFSVTFAFSCTMFELIIFEIL GVLNSSSRYPFWKMNLCVILLI/VFMAV PFYIGYFIVSNIRLLLSPLSQVA*TTDWL FSCLLGLUTFMYYFGKLGDPFPLSPKHGI LSIEQLSRVGVIGVTLMLLSGFGAVNCP PYTYMSYFLRNVTDILALERRLLQTM DMIISKKRMAMARRTMFQKGEVHNKP SGFVGMKSVTTSASGSENLTLIQEV ALEELSRQLFLETADLYATKERIEYSKTF KGKYFNFLGYFFSYCVWKIFMATINIVF DRVGKTDPTVRGIEITVNYLGIQFDVKF WSQHISFILVGHIVTSIRGLLITLTKFFYA SSSKSSNVIVLLAQIMGMVYFVSVLLIR MSMPLEYRTIITEVL/GEELQFNF/YIHRW FQDVFILVRRFSGLILFPLFGLHKQAPEK/Q MAPLNLKPYLQTDKRPSGQKFR |
| 2092 | 10143 | A | 3024 | 1 | 158 | |
| 2093 | 10144 | A | 3025 | 2 | 1067 | AAELGTFAQTSGAWRAERSWINRGP MMWRPVSLLLLLLRLRIGAQKQPSFDAG PHGTGRVHQAAPLSDAPHDDAHGNQFY DHEAFL*REVAKEFDOLTPQESQARLGRY YDRMDRAGDGDGVVLSLAELRAWIAHT HQRHILDSVSAAWDTYDTRDGRVQWE ELRNATYGHYAPGEEFHDVEDAETYKK MLARDERRFRVADQDGDSMATREELTA FLHPPEFPHMRDIVIAETLEDLRNKG VQVEEYIADLYSAEPGEEEPVWQVTERQ QFRDRDLNKGCHLDGSEVGHVWVLP QDQPLVEANHLLHESDTDKDGRLYTKAE ILGNWNMFVGSQATNYGEDLTRHDEL |
| 2094 | 10145 | A | 3026 | 2 | 860 | |

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| 2095 | 10146 | A | 3027 | 2 | 1681 | FGTLGSAPPESCFFQKEDGMKIFQIQGHI VQERVTFKDVAVVF TKVW*LALLDKAQI NL YQDVML ENFMNLM L W1PLPVSFQLG SANGESQOEIQGRDKSEVRIFPPGFSLEV AVEWL YSISIDQRD AHKPTDKPLRPEEA QRKSLSRNVKMHC VKPRAAPQTEPTLE PTLFPSPYGVRPV PWRMRKEAYGLQSP SPARSSGHSQGYGPEGLHRAEQRPFA GSAWTS LQRLATWKRIQRTQNTWLE ALANLLANMTQLPGHFSTLVSAPHPAA EKPLLHSLTHRPVHLLATVTLPAEEAP LMADITAQAILTPQLCSGTL LLAHVAAR AHADTNLQHVGPAGD TTGDMASMTLL PGSDTVLDKDTAPCIVAAPVPAMAKKG QGLAQAIASEGANPRPWQLPRTVGPVVN GEGKCGV GAPRVPTALPSGAVRRGPPS SRPQTHQQLPPCAWKRCRHSTPAHENSQ VGYTLQSHRGRDAQGLGSSLSASACLD VRHGVKGDYFRTLRFNDCPAGFQTGMG PAAPLFC LISPFQNGGIYPKAVAPLYLGS N |
| 2096 | 10147 | A | 3028 | 51 | 569 | SLRTVPPHLYQSGPTPIPPSSLGPASGTR RVES/CV AAPNEQEGSSGGARPVTICDS QNRPCCPPPPSPALPQADPSLKTWLLN HIRWDTDSMICMEDSS**GFK/PNKDSIK VQVRLRGVQGVGHCMGGAALPSTLS CLTPFPAPLNSRHITLAPPLQPENPAQR TTP |
| 2097 | 10148 | A | 3029 | 2 | 395 | |
| 2098 | 10149 | A | 303 | 2 | 519 | FFLFLFLLLLAFFVALTTTRRIGQVPQTL VLQAKRVNTSRPHDP/GS/QPPTSASFNQ LNPTNTSTPQLRSHVASGYVGMQOMQYP H/PPQHAPAPQPCPWQVDITFLPAPTRPL LGSGPGSPSRSPGPGPPAGKGPAPGPE CPPTAQRPTR/RQYLGLPKFGDPRNSPRE KPRS |
| 2099 | 10150 | A | 3030 | 2 | 1038 | GLLEPPSKLISFVIONAVFTLAYLVLCG LCYRAFTKERDKFYLSRSGCSKSFRCRL KLKSP LPTDNL LLLVQFIPDAGTKLD*V NNPEQADDSLCTWDVGTAAAMECVRQY INEVLDFMADMHTLTKL KSHMKTCSQA SDEDTFGGHLKVGLAQIAAMDISRGNH RDNKAVIRYLPWLYHPPSAMQQGPKEFI ECVSHIRLLSWLLGSLTHNAVCPNASSP CLPIPLDAGSHVADHLIVILIGFPEQSKTS VLHMCSLFHAFIAQLWTVTYCEQS AVAT NLQNQNEFSFTAILTALEFWSRVTPAIL QLMG/HINKVMGRKVWLLSMWISLMGG NLPGNAIWT |
| 2100 | 10151 | A | 3031 | 3615 | 5322 | EVPPNPACVQHQA*SVCLCLHLKSSLTSS RR*/CTDKCHDCGAILLEYDEETLGLAI VLSTFIHLSPLAAPLLDIMQSVGLRAS STFTSNQAESWPPTASSRSCSKARSKVIH PLRIQAPQICLPDQTQLNPVDFPDGTFL RTLASSLMD/NELSSIAALSQLEGLNNK KNLPAGGAMIRCLENIATFMEALPMDSP SSLWTTISNQFTTFKALPCVLP LKSLLE PFSKLLSFVIONAVFTLAYLVLCGLCYR AFTKERDKFYLSRSVLELLQALKLKSP LPDNTL LLLVQYENKMKAEALV LKL LNSAQQOQFICADAGTKLAESTLSKQ MIASVPGCGTAAMECVRQYINEVLDFM ADMHTLTKLKTSVLHMCSLFHAFIAQL WTVTYCEQSAVATNLQNQNEFSFTAILTA LEFWSRVTPSILQLMAHNKVLIPMWLPM IQSNIKHLSAGLQLRLQAIQNHVNHHSR TLPGSQSSAGLAALRKWLQCTQFKMA QVENPVLGKQLNFILYEWTPSPAPCQH SGLAIMGLKTNLNDPQAGWGNHIGLY |

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| | | | | | NPLS |
| 2101 | 10152 | A | 3032 | 3 | 1078 |
| 2102 | 10153 | A | 3033 | 2 | 565 |
| 2103 | 10154 | A | 3034 | 73 | 262 |
| 2104 | 10155 | A | 3035 | 29 | 867 |
| 2105 | 10156 | A | 3036 | 2 | 817 |
| 2106 | 10157 | A | 3037 | 3 | 468 |
| 2107 | 10158 | A | 3038 | 1 | 693 |

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| 2108 | 10159 | A | 3039 | 105 | 756 | VDHPYPKRTKVKRAQRSPKQSIYILSL LKLRYFSGPEEPNSNIQTRVVLKRLFMSP HOTGPPLSLSRMIRKMKLSWPGKORRA VVCVGPITDIDVGRSRRYPKLCVCCTAP *PSRAPQAAILKAGGKULTADQLALGLP LKGCCTVLLSGPSPKGRKVVYRHRQRR QEPHPKHQNPTRFSKGRKFERARQRR ASRGYKCLTLDPTLLYKIFA |
| 2109 | 10160 | A | 304 | 444 | 920 | NPSLRCWLGSLSPGKL AGARGRGTVHVG GPEGPCHTSTSTKRMAKRHPVESTGGGG KAP*/SQIRGGGAGQGAGSGVAGNG GGGARSRLRLSPAAASATA/SGPEGSIGP GSGGRSRVPVEAAPPCPRSDVPPAARGA AAAGPGGTWLPASQVGPSPGPWG |
| 2110 | 10161 | A | 3040 | 301 | 390 | |
| 2111 | 10162 | A | 3041 | 1 | 737 | MWFAYSFFTCHDWKLPASAEAKRMP ALCFLYSLOHPLCEDGVCAHEAGVWGI GGLIAYVKGEEVSKQFTSIRRVRGDNY CALRATLFOAMSQAVGLPPWLQPELM LVVFVAILHSHLECREPLILSLYMG LVRCTTLCGYKNIHDIIPDRSGPELGG DATRKMLSFWWPLALILATORISRPVN LFVSRDLGSSAATEAVAILTATYPVGH MPYGLTEIRAVYPADFKNPNPNKLVS TNTVTAARIKKFTFVCMALSLTKDSVQ KPDISLTGRLVOTLPTMRHORGESKDV APLASWSEFSTSSAQSSTSLTNSQG EGKAKQKLECGTSLIVLRCEKNOERIK AAEKRNRSWTTLGGLGAWRPLLFELPVI VQTPDQTNRFQFRYPAKTQSLCSFFHS FDLLTLEAFVKVWFFGCLLILCFVMFW TPNVSEKILDIIGVDFAEALCVPLRIFS FFPVPVTVRAHLTGWL/OGPGAAGCFC SHEASQSPGMPGAPHPDLLVHGTCA LHHPVPLGLQEHSHRHP*QKWPAGGR CNNKKDAELLVAFGNSGHITENQSAVC QPLCFPGPWQFCSHRSGGDFDSHIPCG SHAIRLVDGNPCCVSCFROE |
| 2112 | 10163 | A | 3042 | 889 | 1577 | RGKNTVLKKIRSQFTIRESFDLRYKEHI PLPKLEPLDTKVFGLGEMVCTGPTG VALKGPWKYIGIDEGKDLVNFYSQKL VFRTSWSTWLPGRPRVLLRDCSLKTPK AAQAQEPVTVHLRPRRQGFSGSMRSLID WVSLTHSDGDVIVPVLNERYHWPVL GWVGGVDCDEFFRVVLEARLHLDGV AHQH*GKKEPFTCSKTTSVSHLVEVVP OKLSWVI |
| 2113 | 10164 | A | 3044 | 2188 | 2706 | RESIDQGSNFFFLRLSLDSVTGAGVQ WHDLSLQPPPGFK*FSCLSLSS*DY RSPATMPLGILFYFFFLVETGGFTVLAR MVSIS*PQ/CDPPASASQAGIQNSFFFL ETRVSFAVQAGVQWCDLQSPQPPFG VQPFSCLSLPSWDYRRTPPGANFAVC N |
| 2114 | 10165 | A | 3045 | 33 | 198 | |
| 2115 | 10166 | B | 3046 | 6 | 125 | MAGQFRIYLDWPLLLSQIVLMQTVYYG SLGLWLALVDGL* |
| 2116 | 10167 | A | 3047 | 1 | 110 | |
| 2117 | 10168 | A | 3048 | 260 | 798 | RFGHAQTLGSPSLALGMAGOFRSYVWD PLLLSQIVLMQTVYYGSLGLWLAIVVD GLLRISPLDQMFDAEILGFS/TFQGRLS MMSFILNTLNSA/LGLLYFIRRGKQCLDF TVTVHFFHLLGLLSNSSPFSPSGG*TLV GLGPKPVVALHSLAVIGEYLCMRTELKE IPLNSAPKSNV |

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| 2118 | 10169 | B | 3049 | 1 | 528 | MRRQDCPNPMKKIRSSSPVQQERVSSLY FQSARGGLGVDVSALGTVTVHVPSSSAR VAMAMSAERGCSMGHIMGYRGVGRFT RGNGDHARVGYGNPPEVSISGYDDNW YLGRTDATALSCDVRSNPEPTYDWSSTIS GTFTPTS AVPRAPWSSTQWTVCSHLRL HITNAVDGPR* |
| 2119 | 10170 | A | 305 | 504 | 935 | AYLQSSMIAQSRATRTGLATWQHKKAL DRHFPRLSSRHPLFETCSSPPCKRWGEKS HFRRACKEGRESAPCGIPRPRFKVHTPRG KLRM/RPVPRRFGGSR/LGPRSRKRRTK QPR*PAAPRDSFGAPAAPTPRPSAARNG GG |
| 2120 | 10171 | A | 3050 | 31 | 206 | GSSCRSRLVVVLIVLEGPAPAGDPQT SPSALDKI.KEFONTLEDKARELISRIKQS ELSAKMRVPLRPHEALPVAPGPGGGSV DRLGRPSPPRGPFDVSQLG*AEVWVK HTGGQGSQTHQPHOTE |
| 2121 | 10172 | A | 3051 | 21 | 353 | SAAGTGPEPEPEPHRLNRPADRPFGSG PRASGRAQSPFGPSMARAAALLPSRSPT PLLWPLLLLLLLETGAQDVRVQVLEVR GG/LGGTVELPCHLLPPVPGYISLVTWQ RPDAPANHQNVA AFHPKMGSPSPKPG SERLSFVSAKQSTQDTEAELQDATAL HGLTVEDEGNYTCEFAFPKGSVRGMT WLRVIAPKPNQAEAQKVTFSQDPTTVAL CISKEGRPPARISWLSLSDWEAKETQVSG TLAGTVTVTSRFTLVPSGRADGVTVTCK VEHESFEAPALIPVTLVSVRYPPVVSISGYD DNWYLGRTDATALSCDVRSNPEPTYDWS STTSGTFTPSAVAQGSQ/LVHIAVDSLAFN TTFVCTSQPNPWALARAQVIFVRETPQ ALAPRCGPAGVGGRGDDTAGAAASGW GV/LGLHPCMRVRRRRRSPGGAGGGASG DGGFYDPKASGVGKWGPRLLDTSPPWS HGTRWQ*GGGGGGREGREPRPHVASTP STSRMTWSPSWTAPSSHGG/PVYV*PGPP WPGPLPSCRDRRRRRCCGRCCCCSW KPEPRMCEFKCYPRCEASSGAPWSCAT CCHFLDCTSPW |
| 2122 | 10173 | A | 3052 | 1 | 1620 | MARAAALLPSRSPTPLWPLLLLLLLET GAQDVRVQVLEVRGOLGGTVELPCHL LPPVPGYISLVTWQRPDAPANHQNVA FHPKMGSPSPKPGSERLSFVSAKQSTG QDTEAELQDATALHGLTVEDEGNYTC EFATFPKGSVRGMTWLRVIAPKPNQAE AQKVTFSQDPTTVALCISKEGRPPARISW LSLSDWEAKETQVSGTLGTVTVTSRFT LVPSGRADGVTVTCKVEHESFEAPALIP VTLVSVRYPPEVAISGYDDNWLDLGRD LSCDVRSNPEPTYDWSSTTSQFTPSAV AQGSQ/LVHIAVDSLFTNTFVCTVTNAGV MGRAEQVICVRETPNTAGAGPTGGHGGI IAAHATAVAATGILICQQRKEQLQGA EEDLEDGPPSYKPPPKAKLEAQEMPS HLFTLGA*EHSPLKTPYFDAGASCTEQE MPRYHELFTLEERSGPLHPGATLSGSP VPPGPPAVEDVSLDEDEEGEEEEEYLD VNPIYDALSYSSPDSYQKGFVMSRAM YV |

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| 2123 | 10174 | A | 3053 | 408 | 2708 | DPSSGHWLHWSIRPPAAGWSPRSGRAA ARAQSPRRREHGAPGRTGPGGPRLLL AVLLAAHPGAQDVRVQVLPVGRQLGG TVLEPCHLLPPVGLYISLVTWQRPDAPA NHQNVAAHFPMKMGSPSPKPSGERLSF VSAKQSTGQDTEAELQDATLALHGLTVE DEGNYTCEFAFPKGSVGRMTWLRVIA KPKNQAEAKVTFSDPTTVVLCISKEG RPPARISWLSLDWEAKETQVSGTLAQT VTVTSRFTLVPSGRADGVTVCCKVEHES FEPEALIPVTLVSRYPVPEVVISGYYDDNW YVLGRDADATL*ACDVRSNPEPTGYDWS TTSGTFTPSAVAQGSQQLVHVN/SVLFN TTFVCTVTNAVIGAGABEQVIFVRETP RASPRDVGPLVWGA VGTTLLVLLLAG GSLAFILLRVRRRRSPGGAGGGASGDG GFYDPKAQVLGNDDPVFWTPVVPMPME PDGKDEEEEEEEKAELGMLPPPALE DDMESQLDGLSIRRAVYTPSPVPVPSA GAAAVACTDPVPSSGVHGHNDHKNSSS MFRMKALAQSPYKTPNTAGAGATGGII GGILAAIATAVAATGILICRQQRKEOTLQ GAEEDEDLGPPSYKPTPKAKLEAQEM PSQLFTLGASEHSPKTPYFDGASCTEQ VGAHGKTKEMPRYHELTPLEERSGPLHP GATSLGSPVPPGPPAVEDVSLDEDEE GEEEEYLDKINPIYDALSYSSPSDSYQG KGFVMSRAMYV |
| 2124 | 10175 | A | 3054 | 115 | 467 | |
| 2125 | 10176 | A | 3055 | 315 | 431 | |
| 2126 | 10177 | A | 3056 | 53 | 442 | PRVMAM/ATKGGTVKAASGFNAMEDA QTLRKAMKGLGTDEDAIISVLAYRNTAQ RQERTAYKSTIGRDLIDLKSELSGNFE QGAAGDEGCLIEILASRTPPEIRISQTVYQ QQYGRSLIEDDIRSDTSF |
| 2127 | 10178 | A | 3057 | 186 | 1268 | PRDMAMATIGGTVKAASGFNAMEDAHT LRKAMKGLGTDENAIISVLAYRNTAQRL EIRTA YKSTIGRDLIDLKSELSGNFEQ VTVGMKMP*RDDVQELRRAMKGAGT NDEGCLIEILASRTPPEIRISQTVYQQYQ RSLIEDDIRSDTSFMFKRVLVLSAGGR DEGNYLDDALVRQDAQDLYEAGEKKW GTDVYKFLTVLCSPEPKITLLHVFDEYQ KDIHRRUEPEVLNSETSGIFWKJALLGLI VKCMRNKSAFYAEKLYKSMKGLGTD DNTLIRVMVSSSQKMDMLDIPAHTSKR LLWKSPLYSFIQNRVATSQD/YRKVLLV LCGREMIKIKIPGRDREGSSTLLNFF |
| 2128 | 10179 | A | 3058 | 1 | 4608 | |
| 2129 | 10180 | A | 3059 | 1 | 465 | |
| 2130 | 10181 | A | 306 | 163 | 387 | IRQKKAIFVIVAFKRRGLRKT/DIYYAR GG*FVKNKYRGFIELGTTCGKYFLFCTL AIIDPSDSNIISMPQ |
| 2131 | 10182 | B | 3060 | 109 | 192 | GSSSNEYLYERFGLLAVPSIRSLSVQSK* |
| 2132 | 10183 | A | 3061 | 1 | 1542 | |
| 2133 | 10184 | A | 3062 | 1 | 4226 | EAVLCSRRGRDPSMPPDCCRNAALEARS CQSMTSLFSNTVSPITQDGTSSLPRQSSP AKPPLRALYDLIAPIEGGVVESTFPLG TSRSGFASGTALFWLGDNGKAASPPGV VSSLENNEDNTQCNRLQGYREAAVPI WTQDLALCLPTLQSLKARTAPHLCPVPS SCYKAWYTLAVSKVSGMVEGKA WII LL LLAASHTALLQRPQBGDITPLAGSRAAA VSCQARPFSTFGLMHSSGPVGRHRQLIL VLE |

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| 2134 | 10185 | A | 3063 | 2 | 4195 | ALDFPGRFRPTASFIWASVLFETIRHEA EVSTDYKLSLFDLQTSYQALQRLVSL GHHEALAV AERGRTRAFADLLVERQT GQQSDSPYSPVTIDQILEMVGNGRGLVY YYSLAAGYLYSWLLAPGAGIVKFHEHY LGENTVENSDFQASSSVTLPTATGSALE QHIASVREALGVESHYSRACASSETESA GDIMDQGFEEEMNNKLSNSVTDPTGFLRM VRRNNLFNRSCQSMTSLFSNTVSPQDGG TSS |
| 2135 | 10186 | A | 3064 | 8 | 665 | SAQMAVTTADPRVPRVTRQLCSLATSN RHAWCILSPEEKSAVTALWGKVNVDV VGGKALGRLLVVLPLVDRFFESFGDL STPADAVNGQTPKVKVSWSRKCLGAFS DGPFTWDNLQGSPLPTLK*ACTC*QAC TWDPT*RTFRLPGGNVAGFVVAWAHSL GKEFQPHQCKLA*SRKLVLGLAKCPW PHKYHLKLAFLAVQFLFKGLVSLKTN Y |
| 2136 | 10187 | A | 3065 | 8 | 531 | SAQMAVTTADPRVPRVTRQLCSLASLI QTRMVHLTPVEKSAVTALWGKVNVDV VGGKALGRLLVVLVYVWTOFFESFGDL SVTP*SLLRANP*GERLHGKKSASVPFSDG LAHLIDNLLKGTFAHTEVSLHCDKMLHRG SLKNFRLLGQRAWSVVAGPIHFWEKNF NPTSCRLA |
| 2137 | 10188 | A | 3066 | 91 | 951 | TPHFHQGTGKRAAWPTWFNPAGPGIFLR R*GPGKAQRRRSIAPRFAVGFPSPVRC PHGFGYPHERLRAGPRLPALRKLRYAGI HKEGWPGPIGNSVDPRKPDQVPRSLQA NVQRLKKYASNFILFPQRSRAPRKGDR SVAELKLGHPSLTGPVMPVRNVYKKE KARVITEEENKFKAFASLRMARANAPAL RHTGQKEPREAAEQGC*KAHNKALPGD LESVGQSCWVSTWCVSWBQLGLWGFT AVTSSCQGIWGLERQSKFWIMLNLVL KPCWLF |
| 2138 | 10189 | A | 3067 | 1 | 1603 | MKLLKSILLTILDFSHTCASLVPALQW JLLLLITVLVVEGIAVAQKTDGQNGIK HIPATQCGIIVRTSNGGHFASPNYDPSY PPNKECIYILEAAPRQRIELTFDEHYIIEP SFECRFDHLEVRDGPFGFSLIDRYCGVK SPPLIRSTGRFMWIKFSSDEELGLGISEQ IIPFIPDPDFTYLGRYFKFPS/HDCQF/HL RELDGDSAAALVR*NKRRKQNGQAFD/C IWDL*/MPFQKLKIVRLDYQMEHSNEC KRNFAVYVDGSSSIENLKAFCSTVAND VMLKTGIGVIRMWADEGSRLSRFRLFT SFGGASPAQAALSFCHSNMCINSLVCN GVQNCAYPDWENHCKEKKAGVFEQIT KTHGTIGITSIVLVLIIISILVQVKPRK KVMACKTAFNKGTFQEVDFDPHYELFSL RDKEISADLADLSELDNYQKMRSSSTA SRCHIDHHCQSQASSVQSRNTLSSMEL PFRNDAQOPMKTFNSTFKKSSYTFKQ GHCEPQPGKDRVMGGRFPC |
| 2139 | 10190 | A | 3068 | 163 | 392 | HQELLFLLSSRRLSRSPSEGRSPTMAL GEKKIGFSPLLWCFPPSAAGASSQIKWIQ PCGSGAPPLPGCSGKRAA |
| 2140 | 10191 | A | 3069 | 190 | 352 | HQELLFLLSSRRLSRSPSEGRSPTMVL EKRK*GFPHFSLCRAWRLKVCCKGS |
| 2141 | 10192 | A | 307 | 131 | 395 | LWAARAAVLTSLPTGSPSAALSGCCRP GGQGRYSVAACRGRAAGGVAVPAPHT* AAAPLGHFSFLLGIVSAPAPHEFHGY SGLS |

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| 2142 | 10193 | A | 3070 | 1 | 794 | MSRERPPGTDIPRNLSFIAAL/DGARLLP* PAAQPRGGAGGARRGRDAVRGP/PSR TESGP/SGDLHQPEAAAGPGR/CSRSPDT RKRVR/FADALGLEAVVRRFR/GELPRV PRHVQIQLRDALRHFAPCQPRARGLQE ARAALFPASEPGFAARLLTQRICLERAE GPGVAGSARVVDLAYEKRAPAAYAGP APPPFADRFAFLPAPPGIALLFAIRY RVTGHEFWDNNGGRDYALRGEHPGSG GAFEPQGWIFI |
| 2143 | 10194 | A | 3071 | 133 | 1079 | ARRILQNFSLYPSGEDLKGYKVIQAQTA FSANPANPAUTEASAPIPHDGNLYPRLY PELSQYMGSLNEEETRANVAVVSAGAP LQQLVVARPSSINYMGGLLLT*LMGLI RRSR/II*KGCFREVILCKDQDGKUGLARL KSIDNGUFVQLVQANSSSLIGLV*EFGDQ VLQINGENCAGWSSDKAPRWSNRPPE KITMTIRDRPFERTITMHKDTGHVGFIF KNGKITSIVKDSSAARNGLL/TGPNLCGN SMGQNVIGLKDSQIADLSTSGVTGITI MPAFIFEHIKRMAPSIM/KSLMDHTPEV |
| 2144 | 10195 | A | 3072 | 242 | 512 | AWVPCLLRHCDREPAPRGRTS/SLWPQE GT/P/GQDRGGGPWLGP/SLQ*QRSHGG HLPAQGPLGGPHDNSSFRPGRGAGRG QGIEQGSK |
| 2145 | 10196 | A | 3079 | 184 | 561 | GQRGRGLRKSGASGAGMEHTHTTEA HPHTWVCTSHTCITHTLGDYMHHLHV CVSIHMYV/CPHT/MSLALGMSAHTLHM FSHTKLLSR*HAGRHVPMFKQVCTCTVVP TPSPTHVLGHACGCRPHAS |
| 2146 | 10197 | A | 308 | 327 | 598 | GPARNPAQCRWAGTAGGPSTLSAAAGP GAKPLMPGAA/GAGQAGW/L*VQGPSP RPPGTLAGPQARUITALVPASPTPPC KLKRGGLRP |
| 2147 | 10198 | A | 3080 | 63 | 426 | GLLFPQHCPAHRPRRCLRPSSAGRGA PALSRLPCLHCLPRSSLAPRSVSPAA TPHH*ALQGLVEPWGPIHSAPLHR*APA SGPAGNVRAWPAACRGWCLSRPPLPTV GEGAASRAF |
| 2148 | 10199 | A | 3081 | 1 | 588 | |
| 2149 | 10200 | A | 3082 | 81 | 289 | |
| 2150 | 10201 | A | 3083 | 3 | 387 | |
| 2151 | 10202 | A | 3084 | 2 | 290 | RPPGPSRPPAPPPSSRRPLPKMACCACC ARVTAGVPVGLGWGGPGQSPVTRR ARPPSGLLGFEARPLVPWTSRSPRCQCT ACGHLVEFVL |
| 2152 | 10203 | A | 3085 | 2099 | 5383 | VIQTLSPSPATNDRGHPFLDNWTGKP VHSMVAHLDAVTCIAVDPNGAFLMSG HDCSLRLWSLNDKCTVQETIAHRKKHEE AIHAVACHPSKALIASAGADALAKAHE QGGKRLHLPVEDDGFQAQAPPCWEVEVP QGTNAQFLGCKGLCPSPAPGSEHTRKD GGRCCLTDQMAAFCWDSHLFFRKKGAE LQSPPLLPQIPAPGSGVSFHIQIGLTREF VLLPAASELAHVKQLACSIVDQKRPRVQ VPRP |
| 2153 | 10204 | A | 3086 | 2 | 426 | EDGSLATFLGRRQFQFAEMRHSKRTHCP DWDSRESWGIESYRGSHKRRSHST QENRHCRRPHHQKESD/CCSMCIPLASH SVEEDTHPSHYLEARSLNERDYRRDRYV DEYRNDYCEGVVPRHYHRDIESGYRHC SRS |

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| 2154 | 10205 | A | 3087 | 39 | 1514 | GDGAAAILWGVCRSGRGKTA VWRHFS AEGPFAPAEAMRHSKRTHCPDWGSIESW GHESYRGSHKRTIRISHRSQENRHCKPH HQFKESDCHYLEARSLNERDYRRRYV DEYRNDYCEGYVPRHYHRDIESGYRIHC SKSSVRSRRSSPKRRKRNHSCSSHQSRM KSVDTLGEAGFGKVVCEIDHGMGMHV AVKIVKNVGRYREAAARSEIQVLEHLNST DPNSVFRVCQMLEWFDHGHVIVCIVFEL LGLITYDFIKENSFLPFQIDHQRMAVQIC QSNINLHHNKLTHDTLKPENILFVKSDYV VKYNSKMKRDERLTNTDIDKVVDFGSA TYDDEHHSTLVSTRHYRAPEVILAGWS QPCDVWSIGCILIELYPWGSQIFRLQ**K EHLAMMERNIRTPYPQHMTQKTRKRKY FHP*PSLDWDEHSSC/AGRYVRRRCCKPL KEFMLCHDEEHEKLFDLVRRMLEYDPT QRITLDEALQHPFDLLKKK |
| 2155 | 10206 | A | 3088 | 2 | 175 | |
| 2156 | 10207 | A | 3089 | 1 | 534 | |
| 2157 | 10208 | A | 309 | 1 | 630 | |
| 2158 | 10209 | A | 3090 | 1 | 325 | LEKERDFY/GKLR/NIELICQENEGENAP VLQIRVDILYATDEGFVPEDEGGPOEQE EYYSLGPAEQHGYSLLQIMCLTVKYSLL LSLEDSLVSFHKQKVPLLKVPVF |
| 2159 | 10210 | A | 3091 | 3 | 930 | SSRGRAGGVWFRFERDEGTGAGCGQW TRFCREPKMAVNVYSTSVTSNLSRHD MLAWINESQLNLTKEQLCSGAAYCQ FMDMLTFPGSIALKKVKFQAKLEHEYIQ NFKILQAGFKRMGVDKIISVDKLLKGK FQDNFEFVQWKKFFDANYDGKDYDPV AARQOQGETAVAPSLVAPALNPKPKPL TSSAAPQRPISTQRTAAAPKGWALGV VRKNPGVGNQDDEAAELMQQGRIN*NL LFEDLGOKERDFYFGKLRNIELICQENEG ENDPVLQIRVDILYATDEGFVILDEGGPQ EEQEEY |
| 2160 | 10211 | A | 3093 | 337 | 903 | CNRNTSTLTRCTNVCINTRPAPPLLA/P QATLHFQFP*/PPLPL**QPQALSATRLSL/ VCHGSGRLRLPLQAAPGWLPSGLPLSL FSCGRVLLC*PGWSCYLGKLSSHLLGL PKCWDDRPFKPSFASFOWAPTRPNPLPQ HGTQSQCLFSVGEAPRPHSGSAYYTNQC LOCSRPCSERTRRLGVLLPK |
| 2161 | 10212 | C | 3094 | 821 | 1051 | MAMELINNKHWPVSRLCWNVTLAYVI GEGVNSGRSCLAQTLVTFPRGSAFRD WVLGPAPGGNGALRLFRKILFC* |
| 2162 | 10213 | A | 3095 | 1 | 594 | |
| 2163 | 10214 | A | 3096 | 3 | 761 | TSRGRVGTQAGEPRDLRPPCPSSPLRV AVVVCLEQPERGAWEAHINPQNGDSAV RSFGVTGTHVKLPAGPADNPNVYDFKTT YDOMYNDLLRKDKELFTQNGILHIAGR NKRKIPGPERFONCKDLFLITCEERV YDRVGWKI*ISREQGDLPSPVHVNVLDI QDNHEEATLG/ARFLICEVQCQIQTED MENEIDELLQEFEEKSGRTFLHTVCPIL FSFLDICF |
| 2164 | 10215 | C | 3097 | 129 | 314 | |
| 2165 | 10216 | A | 3098 | 1 | 1434 | |
| 2166 | 10217 | A | 3099 | 1 | 831 | |
| 2167 | 10218 | A | 31 | 1 | 365 | FFFLLLILFLLLIQYHYIFYTFLWRLRLV LTGSI*C*KCKITMNST*IE/TVFKDYEH LYVCKLKNLEKTDKVLTHNFLRLNQ*E PEVLTRAKMYKIYNDIE |

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| 2168 | 10219 | A | 310 | 101 | 520 | RRLOKPGCLIWTRGST*CPILTLPLSRGA GLGTC/KPAMPEPPTHSMGTCAARASPT STTPCST/CAQSHRPGRNKQPK*GMRA HGAGLAGSSTCSPGVGSTG*SQGL |
| 2169 | 10220 | A | 3100 | 1 | 1251 | |
| 2170 | 10221 | A | 3101 | 1 | 5355 | MAGWLRWLWDGLWTGWLACGMSEW MMDGWMWDGWIDGWMGWNPIVPTQ VLHHEIELPGSNVVKLRYLSRRTAGYCSLL KITMTQSTVPLNLRVHLMVAVEGHLEFQ KSFQASPNLAYTFIWDKTDAYGQRVYVG LSDAVSVVGFEYETCPSLILWEKRTALL QGFELDPSNLGWSLDKHHILNVKSGIL HKGTGENQFLTQQAITSIMGNRRRSI SCPCNGLAEGNKLLAPVALAVGIDGSL YVGDFNYIR |
| 2171 | 10222 | A | 3102 | 205 | 393 | |
| 2172 | 10223 | A | 3103 | 2 | 158 | |
| 2173 | 10224 | A | 3104 | 1 | 1923 | MRPPPALALAGLCLLALPAAAAASYFRQ SRLMPSRDPHAGALSAAIASGEPSPETQ TPSPPSAFALRSRGDEGWVWDGWLGLFPV SGQRIVRVQGEWKGKPTSFADYNTKCF GILIREYANIRRAGNIYVFGPLMNDPCQQ MASSLQAKTWAFAHQCSAAKQGLHITE LLHEDALKWTSFAMGWERSRSHDKPR RLSRPLVPPFPFAPCAGSSRVRRGLAD QKGOQFPTQSRLLPTGASFTPDRCGAES WCLRPALIGCSLTSSNPAAPRWAREGG GCGWRCASDKPESHFQSQVDVFTIGGV APPLHGRGQTSSAPLLMEPHLLGLLLG LLLGGTRVLGYPIWWCWAQGCVAVNI FADIYLVVRAILLHLIYHVILYAGKWSQ WAMGAGEKVLSEAEIRFFSVRQPVPR EHSGYPRQVHEIQSCMGLADTADKQSG HIVENEIQASIDQIFSRLEILSSKEPPN KRQNGR/LFRVNSLKYDVQHLQTALRN FQHRRHAREQQERQERAFCRSKPFTT *TILDTITTNWDRHILQF*LPSLPRKFHN GHGIDLIDGHNILDLGLRTQLATLKG QKILDIANMLGLSNTVMRLIEKRAFQD KYFMIGGMILLTCVVMFLVVQYLT |
| 2174 | 10225 | A | 3105 | 1 | 566 | FSGRPTRPRPGAVACRAGDMDPLFQQT KQVHEIQSCMGRLETADKQSVHIVENEI QASIDQIFSRLEILSSKEPPNKRQNAK LRVDQLKYDVQHLQTLARNFQHRRHAR EQRRRQR/FEELSRITFTTNGTQKDKPLTL PNMLGLSNTVMRLIEKRAFQDQKYMFI GGHPA*PLWALFLWFQYRT |
| 2175 | 10226 | A | 3106 | 53 | 151 | |
| 2176 | 10227 | A | 3107 | 432 | 649 | GSHPFAQAGVQWCVCSLTQ/LNS*SSNL SLHSCWDYKFKVLVCICKGDGKEFLMH LKKDVITLTKLIPRYV |
| 2177 | 10228 | A | 3108 | 2 | 677 | PPSFQPSDGRGDASGRNAAMAAQGE QLVLVGDGGTGKTFVVRHLTGFEKK YVATLGEVHEPLVFHINRRPIKFNVD TARQEFGLRDGYIIQAQCAIIMFDVT SRVTYKNVPNWHRLDVRVCENIPIVLCG NKVDIKDRKVKAKSIVPHRKKNIQYHYI CAKSNYNFEKPLWLARKLIGDNPLEFV AMPALAPPEVMDPAFASTEYHDLVA QTTL |
| 2178 | 10229 | A | 3109 | 1 | 549 | |

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|------|-------|---|------|-----|------|--|
| 2179 | 10230 | A | 311 | 411 | 640 | ADIDSRGPKMSLQSSS*SRGSWM*SGN*W SFSSDPTYSGSGGSAPS*WITOGAEECGR TAPGLAGSSTCSPGVGSTR*SHFRPTIPS LENLEDIALTNVLQNRFRVRAEPASLKSPV IALLCMSDLTVGTTVTLQHLNMTMGVIG SQDGRDQVAALNHQKQGLDWPFRVTV LWRKGDQTFWGLLNTGSELTLPDGPDK CRCSPPVKVEAHGCQVINGVLAQIQLTV GLVGPRPVSTTQGAEECORTAPGLAGS STCSPGVGSTR |
| 2180 | 10231 | A | 3110 | 2 | 822 | APALAPASAASPAFEFTLPPSPQPSQSDGR GDASGRNAAMAAQEPQVQFKLVLVG DGGTGKTTFVKRHLTGFEFEKYVATLG VEVHPLVFHTNRGPIKFNVDWTAWPWR NSGGLRDGLYIPSPRVPMDFVTSRVT YKINVFNWALGDLVTSV/CENIPHLCCVA NKVDIKDRKVKAKSIVFHRKENFQYY ADISAQKVPITNLKPFLLWALLGSLMODP* LWNLLPMLLSPPFRVVMPEQLWFAT SMKHLDLEVASDNCPLPDEDDDPVKK |
| 2181 | 10232 | A | 3111 | 116 | 599 | PQVISLPKCCDCRCEPLHLAAEKS LPTVR ETT KVPGEAKSEPHKNKMDGRGGKPMG GCEGPDAMYVKLISSDGHEFIVKRDHIG LTSGTE*KPMLSGPGQFAGGKTHEVN FREIPSHJAIRKVCNVFFTYK/RATFNS SHPRFEFPNLA PNGNLWELA |
| 2182 | 10233 | A | 3112 | 84 | 348 | KYTIKTKTVLKKSGIFSTCPKPKSCYDFV PLNAGPIPPKSLGTNGPHTHLEMLD*RL NKPTIPSPQRSPLTQVGHRT*TRPTRRRPR T |
| 2183 | 10234 | A | 3113 | 122 | 518 | KSLEFFPPALSPSPALILCHLMQAPYHLK VSWEPTDPPT/ALEMLD*RLPLPHA*HKG ETHTCGPLSDHTFKAPDPLQICLLSHQG PASPSQQTHTPYQPSEVTAADSGGTQVDKA NQEEATNTKHHEQEEEOQ |
| 2184 | 10235 | A | 3114 | I | 1452 | MSAYCLQLGGLQALLALTQTPGHRDSL DAQPAAVLVCGWPWLASFERTIVGHK EWTIKDKLKNFKDEFDIVSLPCTLGSH PQDQPMKLKLPWSITYGRCLAPGDHTVSL VIKLVSASLSLAVSNMMLSDMIRWMPAG CGRCLLGLQESRAVCGQCVMGEQVCR VSGPHIRWIPQQLHSCFLFYPSPYPLEP SSNTSFICPHSRTYNGSLLSCIPNSAAAAA PPTPQATSFSPSCSPKQRLPTGRVVEGSD HRVHEARLPGNHSRSGRVD SAPTLAHA GLLITEEKTLENGRRAEALRVGVHWR HGTSGQGRTLVAEKVKPHFRTRGQVY DASSAPVTEHTATELPAGNQSGSPGLQE GGLEGTVVTLVSWKVT/MVSRRC*CRY GQRPH/HHLKVLGNQR/PTHLEMLD*RL PLPQRLTPKKGHTPVVPLLPKFAKPPD PLQICLLSHQGPASPSQQTHTPYQPSEVTA DSRWDT |
| 2185 | 10236 | A | 3115 | I | 414 | |

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|------|-------|---|------|------|------|--|
| 2186 | 10237 | A | 3116 | 112 | 1655 | QEHLQRASPRLLQLLPLPPPPPPAFGGS LSSLGSRMSRQVVRSSKFRHVFGQPAK ADQCYEDVRVSQTTWDSGFWC/SVNP* VLWALICEASGGGAFLVPLGKTGRVDK NAPTVR*HS/APVLDIAWCPHNDNVIA/ SGSEDCITVMVWEIPDGLMLPLREPVV TLEGHTKRGVIAWHITTAQNVLLSAGC DNVMVWVDVGPAAAMI.TLGPGEPPDA NYRGDWEADGGGLICTSCDRKRVRIEPR KGTVVAEKDRPHEGTRPVRAVVSSEGI LTTGFSRMSERQVALWDTKHLESPV/S LRKLHTRNGVPVAFPGPDITNIVYLRGK GSGPIRVFBITSEAPFLHYLSMFS/SKES QRGHGLHGPNGLEVNKCEIAGFYKLH DGR/CVSPMPKPVPRKSDLAQFEDLGPQT PQGPDPCLHGLKEWLGGRDAGPLPSSP/L KDGYVPPKSRRLRVNRLDP/GRRRRAA PEASGTPSSDAVSRLEEEMRKLQATVQE LQKRLDRLEETVQAKL |
| 2187 | 10238 | A | 312 | 375 | 519 | GMLFPKQITPQSI*VETNAKNV*GGDIAS FMGSTHALFEPPDSHSHA |
| 2188 | 10239 | A | 3122 | 200 | 469 | RGGGAGPLTGHVHGLGIAHAAADQFD RLAAGICGHSHPHPLGPLHCCAPLWS GPQON*PTADVAESLQLVTVHQSETEDG EFTECNN |
| 2189 | 10240 | A | 3123 | 1 | 2520 | |
| 2190 | 10241 | A | 3124 | 1 | 1950 | |
| 2191 | 10242 | A | 3125 | 1249 | 2166 | |
| 2192 | 10243 | A | 3126 | 1 | 2424 | MVAIHSALLESSLLFQEQSOLLYLVLTVHE NLNFMAGFTDGSVTLNKGDTIRDRHSK TQILHKGNYPVTGLAFRQAGKTTHLFVV TTENVQDLQFIVAGDECVLYQPDERDC RDDHVFSLYFIMPFPTTLVIALPQLVPTI GVCCGRYLLLLCWQTFVAVVGLGHFSKT MLLFFMPQVFNFLYSLPQLLHIIPCPRHRI PRLNIKTGKLEMSYSKFKTKSLFSLGTFI LKVAESLQLVTVHQSETEDGEFTECNNM TLINLL/QSPWAHT*EKPHIAPAAAAAFAS FLCDHWHPGFRLPSADY*LDFTYGLQL ATLSLSPSLQPIGTIGKLEPSYVIRKFLD AQRIHNLTAYLQTLHRQSLANADHTLL LNCYTKLKSSKLEEFIKKSESEVHFDV ETAIKVLQAGGYSHALYLAENHAHHE WYLKIQLEDIKNYQEALRYIGKLPFEQA ESNMKRYGKILMHHPQEQTTQLLKLCT DYRPSLEGRSDREAPGRANSEFIPIFA NNPRELKAFLEHMSEVPQDPSQGIYDYL LELRLQNWAEKDPQVKEKLHAEAISLL KSGRFCDVFDKAWFQIMHYHMQHEQ YRQVISVCERHGEQDPSLWEQALSYFAR KEEDCKEYVAALVKHIENKIMPLLV VQTLAHNSTATLSVIRDYLVQKLQKQSQ QIAQDELVRVRYREETTRIRQEIQELKAS PKIFQTKCSICNSAIELPSVHFLCGHSF HQHCFESYSESADACPTCLPENRKVMD MIRAQEQKRDLDHQFQHQKLCNSDSFS VIADYFGRASPNFIYVYV |
| 2193 | 10244 | A | 3127 | 1 | 411 | |
| 2194 | 10245 | A | 3128 | 2 | 243 | |
| 2195 | 10246 | A | 3129 | 1 | 1176 | |
| 2196 | 10247 | A | 313 | 640 | 975 | VPWEAGGSMSCIFYPRQSESHNIVKSK RPVTFQONRCQGGGHSADVSSTCQCF QCSHREQGFAPQPSYLT*NGGNSFYLT GCFDNLITSVFCSVRFHGPALKIKGYH |
| 2197 | 10248 | A | 3130 | 2 | 496 | |
| 2198 | 10249 | A | 3131 | 2211 | 2568 | |

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|------|-------|---|------|-----|------|--|
| 2199 | 10250 | A | 3132 | 100 | 2726 | AMMGPLPGPHLLDPLLPSSFCPLPGGITV CDSCRGSLVFGDMGQWFLPRLSLQTG PQAYKLRVTHLYQLKQHNLASVGEDEE GINPLVKIWNLEKRDGGNPLCTRIFPAIP GTEPTVVSCLTVHENLNFMAIGFTDGSV TLNKGDIITDRHSKQILHKGNYPVTGL AFRQAGKITHLFVVTIENVQSYIVSGKD YPRVELDTHGCGLRCSAISDPQDLQFI VAGDECYVLYQPDERGPCFAFEGHKLIA HWFGRGYLIIVSRDRKVSPPSEFTSRDSQS SDKQILNIYDLNCKFIAYSTVFEDVDVL AEWGSYLVLTRDGRVHALQEKDITQTKL EMLFKKNLFEMAINLAKSQHLSDSLA QIFMQYGDHLYSKGNHGDGAVQQYIRTIG KLEPSYVIRKFLDAQRIHNLTAYLQTLHR QSLANADHITLLNLCYTKLKDSSKLEEF IKKKSESEVHPDVEITAIKVLQAQYYSIH ALDLAENHAHHEWYLIKIQLEDIKNYQE ALRYIGKLPFEQAESNMKRYGKILMHHI PEQTTQLKGLCT*LSAQPRRQR*GPR LAGPTLRSPFIPIFANK/HPRDLCALFLEHMS EVQPDSPQGIYDTLLLELRQNWAEHKDP QVKEKLHAEIAISLLKSGRCDVDFKALD LCQMHDQDGGGLYLYEQGKLFQIMHY HMQHEQYPAGQSA/CCERHGEQDPSLW EQALSYPARKKEDCKEYVAALKHIEH GNLMPPLL VVQTLAHNSTATLSVIRDYL VQKLQKQSQQIAQDELVRVRYREETTRI RQEIQELKASPKIFQKTKCSICNSALELPS VHFLCGHSHQHCFESYSESADCTCL PENRKVMDMIRAQGTETPRFSMINSQHQL QVLQ |
| 2200 | 10251 | A | 3133 | 11 | 707 | AKMGAYK YIQELWRKKQSDVMRFLLR VRCWQYRQLSALHRGSRPHR/PPDKVH RLGYKQAKQGYVIYRIRVRRYI*DCSR DRRGGRKRPSVSKGATPGKPVHGHVNO AKVWFYFPTSVAEERPGRH/CGALRVL NSYVWGEDSHLPNFGVIPHGSHSHKAI R/RNP*PPQWITQTQSHKH/REMRGLTSA RPERAVGLGKGHKFVHHTIG/GSRRAAW RRRNTLQAPPLPI |
| 2201 | 10252 | A | 3134 | 1 | 333 | |
| 2202 | 10253 | A | 3135 | 1 | 1530 | |
| 2203 | 10254 | A | 3136 | 1 | 554 | ILSQVRCQAQLAQQAAGGGLSFRAASSL PVSPSLAVSMKAFSPVRSIRKN/SLSDH SLGHSRSKTPVDPDPAALLYNMKDCYS KLKELAVSPISPEQR*ARWEI/QHVRL TSWDLADSPWDLAFLIVQPGIHQRTIG RNQRSRTLPGPSTRDISILSFAGLEFP ELMSNDSKALCG |
| 2204 | 10255 | A | 3138 | 3 | 251 | |
| 2205 | 10256 | A | 3139 | 1 | 1674 | |
| 2206 | 10257 | A | 314 | 22 | 297 | GKEKLSHSAWAPKSSQNSSSASSWSN QSQAQPRFKGEDI/ESHLLMGREALS*IQS /GRLYVLQSL*TRFSTASPEQLDTECR VHSQTL |
| 2207 | 10258 | A | 3140 | 1 | 648 | MSLRKLTIMVEGKGPNIPHACGRQRS SIKVSLLPVATSKSESPKEPEQLRKLFIGG LSFETIDESLSHFEQRRLTDCAVMRD PNTKCSKGFVITYATMEEKYHTVNGH SCEARKALSQKEVASASSQR/GRSGSGN FGGGHGGGFGGNDNFHGENFRGHSSF GGSHGSGGYGSGDDYSGFGNDGNSFG GGGSYNDFGNYNSQSSNFGPM |

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| 2208 | 10259 | A | 3141 | 579 | 2102 | SPKEPEQLRKLFIGGLSFETTESLRSHFE QWGTLTDCVVRFGDRKAVQKPSLAYL GAVFSECL*K*LIAL*LLELCWQRNVL*F *KLTS*I*G*WETGRIFYKRLV*SFLLPY KLK*QKLLRSDFLHKLTLFSGMRDPNT KRSRGGFQVITYATVEEVDAAMNARPHK VDGRVVEPKRAVSREVSGFFFFFLNLL GYVLL*T*DSGVF*TYQNFLFEYRLC*SK PMVFLLLDSQRPGAHLTVKKIYVGGIK EDTEEHLHARDYFEQYKGKNEVVEH*LD IGQWPRKRGFAVTFDDHDSVDKIVSKY QIVAFSGSTICMAF*TLIFPCIYVFFLVQ KYHTVNGHNCEVRKALSKEEMASASS QR/GYACCLIKP*R*L*VTPV*MI*CLNFM S*GRSGSGNFGGGRGGGGGNDNFGRG GNFSGR/GYVWFIYM*F*LLTIFAMKILQ YGNCIQNTLSPSH*NLKFLTGGFGGS RGGGGYGGSGDGYNGFGNDGKFFRNK |
| 2209 | 10260 | C | 3142 | 42 | 152 | MIXXXXXXXXXXXVSPSAFA PXXXXXSLG* |
| 2210 | 10261 | A | 3143 | 3164 | 3255 | |
| 2211 | 10262 | A | 3144 | 12 | 336 | SPVQL*F*FLFVLC*WLSWSAVVYLGPL GTPSADAHT/AGLSKTPPHWAARALDD VFSRLTFSSHSLNMLVQDLTASAPMYS STSRDPP/CLGLPKCWDYKREPRFAH |
| 2212 | 10263 | A | 3145 | 602 | 744 | TPASLKIPVE**NTLLAKMVIS*PRDLPA SASQSAGITGVSHRARC |
| 2213 | 10264 | A | 3146 | 269 | 483 | |
| 2214 | 10265 | A | 3147 | 2 | 988 | KYPPPAVLWFFGFFVLRRLSLSPRLCS GMISAHCKLCLPGSRHSPASASRVAGTT DVHHHAQL/L/YVFLVETGFHRVSQDGL NLLTRLHLPKCWDYR/R*ATTGLCFVF* KKRNAREGGRRQPPDHKS*FL/VFFFLFL KWSLDSVSKAGVQWHLGLSLQAPPRGF TPFSCLSLPSSWDYRRLPRPANFFVFL** IDGGFTVLARMVLIS*PRDLPASASQRA UTGLSHCAWSEFF/CFEKTGSHSVTHARV QRHNLDSLEA*TPGLN*SRSLSPSSWD YRSTPPSANFCSFSRDSVSPC*PGWSRS SDLVIRPPRPKVPGLQ |
| 2215 | 10266 | A | 3148 | 2 | 608 | RDSPPRSLDGGARRDAPPHSPAAECRAH AATWRLKPRPHRPHSLTAPLPHVHWAGT TEPLSPRPATGTREPRPLHPATPRSHS/ WRLARPCRPQPS*DRLSAGAGPGVVS CLDREEKNAGHWLSSAFALVWLWLTEH WLLLVGFIGYVKAGSVPPGCRACFEW AVLAGLGCLPAVSGIPRERFVWVPRHLH VPWLALWE |
| 2216 | 10267 | A | 3149 | 131 | 453 | |
| 2217 | 10268 | A | 315 | 152 | 437 | GLRLCLSRPLTRPGDSSVGSAMASGAG GVGGGGGKIRITRCHQGPPIPYQQR QQHQVWDPDAAVAVRVGKLGWRGRA VRGPGAPRGADRRA |
| 2218 | 10269 | A | 3150 | 403 | 787 | MGRIFLDHIGGTRLFSCANCDITLNRSE LISTRFTGATGRAFLFNKVVN.QYSEVQ DRVMLTGRHMRDVSCKNCNSKLG/W IYGVWPKDSQRF*GKGRR*SGERVLVS EELRALEEHVPPDNS |
| 2219 | 10270 | A | 3151 | 171 | 382 | KNSYKCEECGKIFNEYSHLIARK/RIYT*E KL.YQYKDCKEAINVCSHLTQHQRV/H*K KYYKFNYCQKVFQKI |
| 2220 | 10271 | A | 3152 | 76 | 195 | VHLLNPQHMLPSTHKQRRTTL*KGHAE HLQYYLNNQKLS |

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| 2221 | 10272 | A | 3153 | 2 | 634 | WVWESLNREDLWPCFLRRLIGSSYSTA EMVSGQTLQRAHLREAAASISNOSGVV RK SARFSHQLEGTTEEQQIQIDLGQHP SKAPVFPQVQAHPRFQTGPHGHKLQRN QDPGQLO*IPMLGQTPWQTATGPTI*TOP SGRSPCSHYSGMSTDSGFMLAHSITQVS SQPTCRLLLEACPWTSGGGLPRISQWTD RQVFGSVDRDLISIP |
| 2222 | 10273 | A | 3154 | 275 | 463 | GKFFSLCETLFPSPGVGSFFSSCTMDSSRS LGVGSKNSHFSLA*NTDLRLSLCFFGW KEDIKF |
| 2223 | 10274 | A | 3155 | 5904 | 7919 | FMFINMSVCRLLITTKYLLLLFHESLILLS ENLRKDIVEAVTGSPASQTSICIGLLRSA ELALLHPVDQANTLLKSPVSESVSPVVP DYLPTENGDFLSSKRKQISRDINRISVT VNHMSDNRSMSVDLSHIPKDFLLFKSA/ SDTNLAKRAFFPMDYLSDKHLKGTSEDE SSGLVYKSGSGEIGSETSDKKDSFYTDSS SILNRYREGFRILYSFG*VMGNQNLISSTL TSKGNETJESIFKAEDLLPEAASLSENLD ISKEETPPVRITLKSQSLSGESLRERLPH PNLGFPLVFSYKNMKRSSQMSF/EATIS LDSMILEEQLESDDGSDSHMFLEKGNRK NSTTNYRGTAESVNAGANLQNYGETSP DAISTNSEGAQENHDDLMSVVFVKITGV NGEIDIRGEDTEICLQVNVQVTPDQLGNIS LRHYLCNRPVGSQDKAVIHSKSSPEISLR FESGPAVIHSLLAEKNGFLQCHIENTS TGFLTSSLNIIQHFLDETATVVMPMKI QVSNKINLKDDSPRSSTVSLEPAVTVH NDHLVVERSDDGSFHIRDSHMLNTGND LKENVKSDSVLLTSKGYDLKKQORSVTO ATQTSPPGVWPSPQSANFP*EFSFGLHGE QLMEENESLKQELAKAKMALAEAHLE KDALLHHIKKMTVE |
| 2224 | 10275 | A | 3156 | 149 | 382 | ARHCSCSP*OHPGRSR*AEHLRTGV*D QPAQRGETPSLWKNTKIRRAQWWCPPI PATSGGLRQENYLNPGRQRLQ |
| 2225 | 10276 | A | 3157 | 162 | 342 | |
| 2226 | 10277 | A | 3158 | 1 | 1995 | ERLVTTPGVPAFSGCGRRHGRGTGRRAM ASCVGSRSLSKDDVNYKMHFRMINEQQ VEDITDFYRPHITVLLSFTNDSLMYFAF TTDDSPV*DNWRGILSGILLIIV*AFP NGPLTRHPALWRMVFGLSELYFLV LLFPFQAKSLMDWLDNLRATREA NVMEYAVNCHVITWERIISHDFIAGHF WGWAMKALLIRYGLCWTSITWELTEL FFMHLLPNAECWWDQVLDILLCNGGG IWLGMVACRFLERRTDHWAASKDIHTTT GKIKRAVLQFTPASWTYVRWDFPKSSFQ RVAGVYLFMIWQLTVELNFTLKHIFVF QASHPLSWGRILFUGGUNSFPQLRQYYA YLTDTQCKRL*GTQCWVFGVIGLAAI VCIKFGQDLFSKTQILYVVLWLLCVAF TFLCLYGMWYAEHYGHPKRKRPTECE DGTYSPEISWDHRRGKTKGSEDSPPKHA GNNESHSSRURNRHSKSVTNGRWER NEKPVWNSKMFPECLGTEEGKWELHLG TPRGGSRAHRGKPGRGEGTLGVILLRSL SLCPTDLGRVQADHRLGGPFANVGSLL TSALDMRSPVAARCVETVAISFHSQC EQLRAMLDRGCSVNIFPSDEALTPWLM WSPVFNFIYESTFPID |
| 2227 | 10278 | C | 3159 | 410 | 538 | |
| 2228 | 10279 | A | 316 | 3 | 609 | |
| 2229 | 10280 | A | 3160 | 4 | 334 | FFPKALIFCREVGISPPPKIRFP/SPKFPGN RFSPPRVVKKPPGP/SPFKRPPIRKKILPCQ PP*TLAPPRIL*KGPP/PSSSSG*NPYLFIO QKTEYLLWSRPCWHCEQR |

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| 2230 | 10281 | A | 3161 | I | 1130 | PLLPSTLSVEDAAILLQQVMRAFSSKQAST VVFSDTVVSEKFINDCTELFRELHMQK AEKEMKNPNVHILITEEDLKQJSTLESVST SKKDKKDERRRKATEGSGSMRGOGGN AREYKIKKVKKKGRKDDSDDESQSSH TENEEESGYDKKDENILEDVKWGT SQFL EIFQDIEKARDKLEADSELESVFMSSST SASGTGRKRTIKDLQEEVSNLYNNRLE KGMKFFADDTQAAALTKHLLKSVCCTDITN LIFNPLASDLMMAVDDPAITSEIRKIL SKLSEETKVALTKLHNSLNEKDQHALLV KYQGLVVKQLVSQSKKTQGDYPLNNE LDKEQEDVASTTRKELQELSSSICDLVLK SRKSSVTEE |
| 2231 | 10282 | A | 3162 | 20 | 2478 | RVCSSASTASQAVMADAWEEIRRLAA DFQRAQFAEATQRLSERNCIEIVNRLIAQ KQLEVVTLDGKEYITPAQISKEMRDEL HYRGGRVINVDLQQVINVDLIHIENRIGD IHKSEKHVQLVLGQLIDENYLDVRVGQEV NDKLQESQGVITSELCKTYDLPGNFLTQ ALTQRLAIHIIHGDLDNRGVIFTEAFVAR HRARIRGLFSAITRPTAVNSLISKYGFQE QLLYSVLDELVNSGRLRGTVVGRQDK AVFVVDIYSRQTSTWVDSFRQNGYLEF DALSRGLIPDAVSIIKRYKTTQLFLKA ACVGGQLVDQVEASVEEAISSGTWVVDIA PLLPSTLSVEDAAILLQQVMRAFSSKQAST VVFSDTVVSEKFINDCTELFRELHMQK AEKEMKNPNVHILITEEDLKQJSTLESVST SKKDKKDERRRKATEGSGSMRGOGGN AREYKIKKVKKKGRKDDSDDESQSSH TGKKKPEISFMFQDEIEDFLRKHQDAPE EFISELAEYLKPLNKTYLEVVRVFMSS TTSASGTGRKRTIKDLQEEVSNLYNNR LFGKRGWKFFADDTQGWLLPKHLLLEV QCVLISLNLAFNPLFGFGLMDGQ*DDPG RPFSTSELKRNLSKLSEETKVALTKLHN SLNEKSIEDFICFLDSAAEACDVMKRG DKKRERQILFQHRQALAEQLKVTEDPAL ILHLTSVLIFQFSTHSLMLHAPGRCPVQII AFLNSKIPEDQHALLVKYQGLVVKQLV SPSKKTGQGDYPLNNELDKEQEDVAST TRKELQELSSSICDLVLKSRKSSVTEE |
| 2232 | 10283 | A | 3163 | I | 389 | IPSEISRSVAFSLPLLSVSGLEAIQRTPK NQVYSRHPPENGSKFLNCYVSGFHPSD IVGDLMLNGERIE*A*HSDLAFRKDWAF YLLDYTEFTPT/KEDEYACRVNVHTLSQP KICKWDRDMLASMAEA |
| 2233 | 10284 | A | 3164 | 2 | 409 | RPRVRPKVRSIRAEMSRVALAVALLS LSGLEAIQRTPKIQVYSRHPAENGSKNFL NCYVSGFHPSDIEV/DLLKNGERIEKVEH SDLSFSKDWAFYLLYTEFTPT/KEDEY ACRVNVHTLSQPKVWKWDRDM |
| 2234 | 10285 | A | 3165 | 26 | 299 | |
| 2235 | 10286 | A | 3166 | 11 | 486 | |
| 2236 | 10287 | B | 3167 | 198 | 282 | XPSLEDLSNSIQKLIHAEAEPEEQSAA* |
| 2237 | 10288 | A | 3168 | 80 | 827 | AAQAVLARSKLESICRELHGHNRSLKEE GVQARAREEEKKKEVTSHFQVTLNDIQL QMEQHNRNSKLRQENMELAERLKKLI EQYELREEHDKVPFKHKLQQLVDAK LQAQAEMLKEAERHQRKEDFLLEAV ESQRMCELMKQEQETHLKKQALALYTEKF EEFQNTLSKSSEVFTTFKQEMEKMIKKI KKLEKETTMYRSRWESSNKALLEMAEE KTVRD/VERTGGPAGKNPTAGEAVPGTAD RAQ |
| 2238 | 10289 | A | 3169 | I | 2511 | |

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| 2239 | 10290 | A | 317 | 1 | 949 | MGSCAARASITSTTPCSTAPSPINHPKAE ECERTTACQDWQAAPPAFVRDPLGEPF WAPESGGDVESLYTLRDCKYTNQHPVF SSRFVNPIDTLYLALVGPWKTFMSSS GIVNTPIGTLYLQVTVPPHLTRFFALSP RQPSRFKNGLLFTQTGTTLNPLSGYSSDY KGRGRFRNRHPOTGFSAGANQRGLVAT LSPGGEGQSAVVPVSLVKRKTTLAPNT QTASPRALADSLMQLARQVSPITGKRAV SATAINLKVCCKTSHQHPVSSRFVSAPID TLYLALVRTWRVFMSSSGVNTPIGTL YLAQGL |
| 2240 | 10291 | A | 3170 | 93 | 517 | GRGHLGG/VWC*RSQERAQKKEASAET /CSWLQMKQNRKPSQEKTRDITRMENP DRGFVPKGECSEFQLEHVREMQEKLARL HPSLDVCGEEDDEEEDGVTEGLPEEQ KKTMADRNLQLLSNVSGCLGALVPGG MRGGE |
| 2241 | 10292 | A | 3171 | 3 | 348 | FFAFLGLIPFNAPLPHSTWGAAEHPPE VKSHSLKRMRGAVW/CLRGTPTR/CHS SGSAFSAFCFSWIELLRSSRLSSWSRLR SAIVFCSSGKPLSDPNPLPHRPPPHHT PG |
| 2242 | 10293 | A | 3172 | 2618 | 5946 | PGCNFSLDVCREEDDEEEDGVTEGLP EEQKKTMAADRNLQLLSNAGRAWQL APMEPELLVRKVSALQACVRGLFVRRQF QSLRAEYEAIVREVEGDLGTQWTEGRI PRPRFLPEKAKSHQTWKAGDRVANPEQ GLWNHFPCESEGEATWEEMVLKKSSE SSANQGSCLCRDHSSWLQMKQNRKPSQE KTRDITRMENPEATDQRLPHSQPLQEL QYHRSHLAMELLWLQQAINSRKEYLLL KQTLRSPEA |
| 2243 | 10294 | A | 3174 | 16 | 319 | LGTRPAHRSSQ*GKGSPLPGFAPLISRG GKEGGPGDRAAHADFLAPEGAGHM/R GSHGSPLIAPLPTYPHPSGLFPLGALPLA RPRHQGAALGSHVEIQ |
| 2244 | 10295 | A | 318 | 1 | 4425 | |
| 2245 | 10296 | A | 3180 | 417 | 736 | YGLGAVAHACNPSTLGGQAGQITRLAV QDQPDQHCETPSLIKMQKNLPHGGVVC LQSQLLRGLRQGNCLNQGSGSCSPRSH QCTPAWAIE*ESVSKKKKKKLVV |
| 2246 | 10297 | A | 3181 | 1 | 2061 | MGAVRDELHSLVVPFLMGRGAQTPMA AAALRDPAAQGCVTIFEDVITYFSQEWVL LDEAQRLLYCDVMLENFALIASLGLISFR SHIIVSQLEMKGEPWVPDSVDMTSAMAR GAYGRPGSDFCHGTGEGKDPSEHNVSVE GVAQDRSPEATLCPQKTCPCDICGLRLK DILHLAEHQITTHPRQKPFVCEAYVKGSE FSANLPRKQVQONVHNPIRTEEGQASPV KTCRDHTSDQLSTCREGGKDFVATAGFL QCEVTPSDGEPHEATEGVDFHIALRHN KCCESGDAPNNKSTLVQHQRHSRERPY ECCKGIFTTYAADLTQHCKVHNKENP YECFEGGKFFKPAL/SLVKHRRVHTGESP HVCGDGCKFFSRSSNLQHKRVHTGEPK YECSDCGKFFSRSSNLHHRVHTGRSA HECSECGKSFNCNSSLIKHWRVHTGERP YKCNCEGKFFSHIASLHQHIVHTGERPH GCGCEGKAFSRSSDLMKHQRVHTGERP YECNECGKLFSSQSSLSNHRRLHTGERP YQCECGKFFNQSSLSNHRRLHTGERP YECSECGKTFQRSSNLRLQHLKVHKPDRP YECSECGKAFNRQPTLIRHQKHIRERSM ENVLLPCSQHTPEISLRTDLIRALSSTML NLVHPSTHTGEVP*EC*LCWKLSDGKLH SLTVEFISVFSLLGL |

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| 2247 | 10298 | A | 3182 | 441 | 1074 | QRVQSLKK*CWG/FNWVHSGGKI*KOI GPY/LNTG/TRLKSKWIVPQNCIISRRQQG KRV/VHLGLGKDFLNP/TPKAQSM/RGKIDK LYFIKIENFSLKGTIRRTKRQA/VEWQK/ITY LQNISDK*VASRLHKEVSKLNKVKPIVDL MRCF/RPELAASG/PCSLSPSICFQH*IQNV LLEIQVRSHQPSLESNRRP/WHSKVHNSL QCWAKIIEAPLFSLL |
| 2248 | 10299 | A | 3184 | 178 | 488 | VSVTVFGNTVRNKTEDDSGGNWEPPRTI LQASGKLKNPKARLASECLSPFDSTGKAI HLCCVQGRASRSHYSLGHH/MRHHSHVG E*S*KCPGCGKGSTKDLRLW |
| 2249 | 10300 | A | 3185 | 7 | 310 | KKRSHCAQAGLELLSGQLG*TSSVQKIR KLACGGVHPWSQLLERLRWEDS/LPQG GQCSEF*SHHCTPAWATE*DPVSNNNK QKQKPESLNSRATSRP |
| 2250 | 10301 | A | 3186 | 65 | 203 | KGDFQGHQGPWDAPP*PAFWWQREAR GEGEAMSQSPCRGRGNAMRYRPSAQPE TGPASG**TEAARGSSGWAEPWPRG*KP PEFPMRLGWFFPTPGA/FSLPILCDEER* GQRSSGCEQQELRSPRETELQVTSPI/CF SAGPRRPGPAPGGPQAARAYCCHLKTS EPTFHQAPTAEVSWEFSPA/PPADKEMT SMATPEKCPITSQ/APAIRKAALPHPERGN YFLSAAWPQGAFFPLWGSASFVALPWS PRAGAAPLCPGKAPPSKTRLGRAVTFP* AEGGTGRGRGHVAVPLPWERQQRNV |
| 2251 | 10302 | A | 3188 | 1 | 2559 | |
| 2252 | 10303 | A | 3189 | 259 | 3222 | |
| 2253 | 10304 | A | 319 | 160 | 747 | VLNGSORPSQSKKHFPKPGPTFGGASVH QMFMISLPA/GPDLSGFDEDDRGWPNQ LDMDSYSSSYQDVACYGTLPDRSPRRN KEGCTSKTPHALTVSPFGIFSSATKVFO APNACKRGA*GKG*PWEGKASSKPRGD FLREGRKMSWKLFRNKLJSSOPYVPVGV CLTSVFTIASLGEQGMVFLKVDLFKLT G |
| 2254 | 10305 | B | 3190 | 114 | 2876 | MDKFLDTYTLPRLNQEEVESLNRPIITGSE IEAIIINSLPTKKSPPGDGFTSEFYQRYKET VVVRLSPSPFNGGLPLGSDLVFYAPGPQ KIIWVMVHVGAALAKDGFSPLDVGVHG FCFRNHHGTGFSAGANORDPLAATLS GPGGEGQSAVARLTGEKKNHPGAQYAN RLSPRVGRFINAAGITGFFTGKRAVSAT QLMVKDDVITYAIIKLSWPLDIIIPSCLA LHRIETELMGKFDKGRPLTPHPLMLRLA IE |

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| 2255 | 10306 | B | 3191 | 1 | 2640 | MEIRGRVEQRVGYTIEQINHMIRDVFGTR LRRRAEDVFPFVIGYVAAHKGGVYKTSVS HLAQDLALKGLRVLLVEGNDPQGTASM YHGWVYDLHHIAEDTLPPFYLGKDDVT YAIKPTCWGLDIIIPSCALAHRIETELMG KFDEGKLPDTHLMRLAIETVAHDYDV IVIDSAPNLGIGTINVCAADVLIIVTPAE LFDYPSALOFFHMLCDLVKNVDLKGFEF GELAPLYGCWGLRTGIACAPHASL NLHGLNQIRNVKKQSVYLMNLRKSGTL GHFGSVDETTYERLAESLDSLAEFFEDL ADKPYTFEDYDVSFGSGLTGLKGRDL ATYVINKQTPNKQIWLSSPSSGLKRYDW TEKNWVYSHDCVSLHDVLAELTKALK TKLDLSSLAYSGLKELDAQPGYMLHAQ YMLRPPLSSPMQHRAPETGPTSRNSVLN AVTPPAPTTPSPFLFDSRGSPRRKTYQNV QQFIDEGNYTSGDNHTLRDPHYVEDKG HKYLVFEANTGTENGYYQGEESLFNKAY YGGGTNFFRKESQKLQQAQKRDALAE NGALGHIENNDYTLKKVMKPLITSNTVT DEIERANVFKMNGKWYLFDTSRSGSKMT IDXGSPXKIRLFYTDYSGKHYGKQSLTT AQVNVKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNYTSGDNHTLRDPH YVEDKGHKYLVFEANTGTENGYYQGEES LFNKAYYGGGTNFFRKESQKLQQAQK RDAELANGALGHIENNDYTLKKVMKPL ITSNTAAANQESSHVQQALALEQQFLE RTQALEAQIVALERMRAADQTTAKQGM CTQVHLTNTSRHAGRPSCQFCSTRRQR HRLSDPKQDLGNRRFSPPP* |
| 2256 | 10307 | A | 3192 | 1 | 454 | MERRNRRTGRTEKARIWEVTDRTVRTW IGEAVAAAAADGVTSVPVTPHTFRHSY AMHMLYAGIPLKVLQSLMGHKSSISSTEV YTKVFALDVAARHRAIRVPRQQGDYRT RIWKFEGLSNVLVIQLNKLICVMCLVR DCDVLKTYFHL |
| 2257 | 10308 | A | 3193 | 2758 | 2946 | |
| 2258 | 10309 | A | 3194 | 2372 | 3570 | EALLPGDQDSQSGKGVAAREVWFLPSSF APVLLRLVGNHHVGDNSIDSWKNAGR/V FKDSKFDANDPILKDDQTEWSGSATFT SDGKIRLFYTDYSGKHYGKQSLTTAQVN VSKSDDTLKINGVEDHKTIFDGDGKTYQ NVQQFIDEGNYTSGDNHTLRDPHYVED KGHKYLVFEANTGTENGYYQGEESLFNK AYYGGGTNFFRKESQKLQQAQKRDALAE LANGALGHIENNDYTLKKVMKPLITSNT VTDEI |

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| 2259 | 10310 | B | 3195 | 1 | 2232 | MKLMETLNQCINAGHEMTKAIAIAQFND DSPEARKITRRWRIGEAADLVGVSSQAIR DAEKAGRLPHIPDMEIRGVRQVGYTTE QINHMIRDVFGTRLRRAEDVFPVGYAA HKGGVYKTSVSVHLAODLALKGLRVLL VEGNDPQGTASMYHGWVPLHHIAEDT LLPFYLGEKDDVITYAIKPTCWPLDIIPS CLALHRIETEFMGKFOEDNNAGRMVRL QPFTSDEKKSIVSTLTFPGHILRRDKSLT TAOGCDKINNKTSPFISPDALALKGLRV LLVEGNDPQGTASMYHGWVPLDHIHAE DTLLPFYLGEKDDVITYAIKPTCWPLDII PSCALHRIETELMGKFOEGKLPDTPHIL MLRLAIETVAHDYDVIVDSAPNLGIGTI NVVCAADVLIVPTPAELFDYTSALQFFD MLRDLLKNVDLKGFEPTVRILLTKYSNS NGSQSPWMEQIRDAWGSMLKNVEPE NGEVGKXGSQLINQEKMKFRIRNRSYI DRDSEVYLQENEPDGLDQKLLLEDLQKK KNDLRYIEMQFPFLVSSSRWVVKRGELT AYVEDTYLFSRRTSKQQVYFFLNDVLI TKKKRRSSSLREGDNQKQAYKETYGVS HITRHDMLQIFKQQQNEKYQVPQFDQST IKNIESAKGLDVSDAGMVPLVQLPLHLE KSGYSTLTIPVNLRQTSLTQKQVMCQNL YTHLKSTWEKHKTIVDGERKTYQKRS AVFRMKGILHSATTIR* |
| 2260 | 10311 | A | 3196 | 1260 | 1340 | LPMALAVGFCFRFNHHQTFGSPAGANQ RGPLAATLSGPGGEGQSAVARLTGEKK NHPGAQYANRLSPRVGRFINAAGTTGFP TGKRAAGFCFRFNHHQTFGSPAGANQ PLAATLSGPGGEGQSAVARLTGEKKNHP GAQYANRLSPRVGRFINAAGTTGFTGK RAGFCFRFNHHQTFGSPAGANQ ATLSGPGGEGQSAVARLTGEKKNHPGA QYANRLSPRVGRFINAAGTTGFTGKRA QAQAK*WHYREPLLLRAQLTNPSPGQQL KSVQDQWPVQKQFSSGSDLYQLHPHFVQ HFLEPCFPRHPEFAPPSTGESHYVCWIV |
| 2261 | 10312 | B | 3197 | 200 | 2602 | MQLARQVRSLESGQVQKHGQHTKMSQ VLWRSQEENPATLGNINQLFDWIPQNDL LGHPKTKAFITHGGTNGIYEAHYGVPM VGVPMFADQPDNIAHMKAKGAAYEVN LNTMTPRPGGEGQSAVARLTGEKKNHPG AQYANRLSPRVGRFINAAGTTGFTGKR AVSATQLMDFAFGTTIKQDFRLLGGQTS VDRLLQLSQGQAVKGNQLLPVSLVKRK TTLAPNTQTASPRALADSLMQLARQVSR LESGQDFAFGTTIKQDFRLLGGQTSVDR LLQLSQGQAVKGNQLLPVSLVKRKTTLA PNTQTASPRALADSLMQLARQVSRLESG QILPDGPHIHQTEFSPAGANQ LSGPGGEGQSAVARLTGEKKNHPGAQY ANRLSPRVGRFINAAGTTGFTGKRAYS ATQLIPKVDKTTIKGKKQSRKTGNSKNQ SASPPPKESSSSHATEQNWTENDFDELRE EGFKRSNCSELQEEVQTHGKEVKNLEKK LDEWLTRITNEEKPLKDLMEKTKAQEL RDKCTLSRRFNQLEERVSVMEDQMNE MKREEKFREKRIKRNEQSLQEIWDYVVKR PNLRLIGVPESDGENGTLENTLQDIIQD FADFGTTIKQDFRLLGGQTSVDRLLQLSQ GQAVKGNQLLPVSLVKRKTTAPNTQT ASPRALADSLMQLARQVSRLESGHQAPC MKSNNALIVILGTVTLDAVGIGLVMPVL PGLLRDIVHSDSIASHYGVLLALYALMQ FLCAPVLAALSDRFRRTVLLASLLGATI DYAIMATTPLVWYPLVNSPSC* |

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| 2262 | 10313 | B | 3198 | 1 | 3198 | MKLMETLNCQINAGHEMTKAIAIAQFND DSPEARKITRRWRIGEAADLVGVSSQAIR DAEKAGRLPHPDMEIRGRVEQRVGYTIE QINHMIRDVFGTRLRRAEDVFPPVIGVAA HKXSPVIGVAAHKGGVYKTSVSVHLAQ DLALKGLRVLLVEGNDPQGTASMYHG WVPDLHIHAEDTLFPFYLGEKDDVYAI KPTCWPGLDIIPSCALHRIETELMGKFD EGKLPDPLMLRLAIETVAHDYDVIVID SAP |
| 2263 | 10314 | A | 3199 | 1 | 2259 | |
| 2264 | 10315 | A | 32 | 603 | 855 | GGWIMRSQVRDQPDQGHETLSLLKLQK LAGHGGACL*SQLVRRLRQEYHLNPGG GGCSEPRFGHCAPAWATE*DSVSGKKK KKK |
| 2265 | 10316 | A | 320 | 1812 | 5065 | PNKTGGKTVSDGLHHPSQLHSKLENDQ GFYNVDSSTGFHNKTNVGPFRKSPFLV MGVDWAEITRRSMMMOMRRAPMSDDIL ARDRGRLSRGNRRNGGGGCRDDDDGG GGAGAVRTGEGATEELPPVGGRRVRFQH RGELFVLSAGDLHRDRDTHRGAGSG GGSAMASGAGGVGGGGGGKIRTRKCHQ GPIKPYQQGRQQHVSSSRPDLSGFDED DKGWPFENQLDMSDYSSSYQDVACYGTL PRDSPRRNKEG |
| 2266 | 10317 | A | 3200 | 1 | 2418 | |
| 2267 | 10318 | A | 3201 | 1907 | 5097 | TSKKIVKQAPVLFTFTA/LLAGAIAQFA KENNHAKYKETYGVSHITHDMLQIPKQ QQNEKYQVPQFDQSTIKNIESAKGLDVW DSWPLQNAAGTVAEYNGYHVVFALAGS PKDADDTSIYMFYQKVGDNSSDSWKNA GRVFKDSDFDANDPILKDQQTQWSSGS ATFTSDGKIRLFYTDYSGKHVGKQSLTT AQVNVSKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNEGILPISEPPIQDFR LLG |
| 2268 | 10319 | A | 3202 | 891 | 2136 | GATQAFAKENNOKAYKETYESAKGLD VWDSWPLQNAAGTVAEYNGYHVVFAL AGSPKADADDTSIYMFYQKVGDNSSDSW KNAGRVPKDSDFDANDPILKDQQTQW SGSATFTSDGKIRLFYTDYSGKHVGKQSL TTAQVNVSKSDDTLKINGVEDHKTIFD GDGKTYQNVQQFIDEGNYTSGDNHTLR DPHYVEDKGHKYLVFEANTYGTENGYQG EESLFNKAYYGGGTNFRFKESQKLQQSA KKRDAELANGALGHIELNNDYTLKKVM KPLTSTNTVDEIERANVFKMNGK WYLF TDSRSGKMTIDGINSNDYMLGYVNSLS TGPKYPLNKTLGLVLQMGDPNDVFTFY SHFAVPQAKGNVVTISYMTNRGFFEDK KATFAPSFLMNIKNKTSVVKNSILEQG QLTVN |
| 2269 | 10320 | A | 3203 | 1 | 3987 | |
| 2270 | 10321 | A | 3204 | 2 | 247 | QAGFSSSLRMASIFSIHSGVTRDLSRLS TILSPLYNTVAPGAN*CRELKLVLDDDD VLSTEVRVITSSASNITPAFFCS |
| 2271 | 10322 | A | 3205 | 1099 | 2224 | DGOQLIALHRLALRELQQA VHA GLPQ AKILFDGSE/TRQNPLOQLVHMG LRP L DKKNFQEP |
| 2272 | 10323 | A | 3206 | 1366 | 2673 | |
| 2273 | 10324 | A | 3207 | 1 | 7035 | |
| 2274 | 10325 | A | 3208 | 1 | 2328 | |
| 2275 | 10326 | A | 3209 | 1 | 2328 | |

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| 2276 | 10327 | A | 321 | 819 | 1242 | KAYASLSLWQAPSGESRPAPAAADLRGS SG/RPP*TFNPFCGPHTGCPAGSPISFQ PRCLLVAKSKGMPVSDAAAYESPWK GAGAPALGLLGALSSEVADRALQAA WAPRDAGRDLPGQDRPQGPAGASLGP SRS |
| 2277 | 10328 | B | 3210 | 1 | 2541 | MPROVGSQGPGLLVAGQAAVGTGGKK SLCQYRKPDGSGIVSLKIDWIERYQLPQ SYQHRKAGECLLHEYEDLVPIRDLRL PGGRYLPRAKHVPAPSEDPEDQEQI.RD FADFGTTIKQDFRLLGQTSVDRLLQLSQ GQAVKGNQLLPVSLVKKRKTLPAPNTQT ASPRALADSLMQLARQVSRLESGQDFA DFGTTIKQDFRLLGQTSVDRLLQLSQSQ AVKGNQLLPVSLVKKRKTLPAPNTQTASP RALADSLMQLARQVSRLESGQDFADFG TTIKQDFRLLGQTSVDRLLQLSQGQAVK GNQLLPVSLVKKRKTLPAPNTQTASPRAL ADSLMQLARQVSRLESGQDFADFGTTIK QDFRLLGQTSVDRLLQLSQGQAVKGNQ LLPVSLVKKRKTLPAPNTQTASPRALADS LMQLARQVSRLESGQDFADFGTTIKQDF RLLGQTSVDRLLQLSQGQAVKGNQLLP VSLVKKRKTLPAPNTQTASPRALADSLM LARQVSRLESGQDFADFGTTIKQDFRLL GQTSVDRLLQLSQGQAVKGNQLLPVSL VKKRKTLPAPNTQTASPRALADSLMQLA RQVSRLESGQDFADFGTTIKQDFRLLGQ TSVDRLLQLSQGQAVKGNQLLPVSLDD VTYAIKPTCWPLAIIPSCALHRIETELM GKFEDEGLPTDPLMLRLAIETVAHDYD VIVIDSAPNLGIGTINVCAADVLIPTPA ELFDYTSALQFFDMLRDLKKNVLDKGFE PDVRIILLTKYSNSNGSQSPWMEEQIRDA WGSMLKNVRETEDEVGKQIRMRTVF EQAIDQRSSTGAWRNALSIWEPVNEIFD RLIKPRWEIR* |
| 2278 | 10329 | A | 3211 | 1 | 3849 | |
| 2279 | 10330 | B | 3212 | 1 | 6724 | MDNFFAPVFTMGKYYTQGDKVLMLPAI QVHHAVCDGFHVGRMLNELQYQDEW QGGADFADFGTTIKQDFRLLGQTSVDRLL QLSQGQAVKGNQLLPVSLRKNQTSRPP SMHVDDFVAESKEVVPDGIPIPKRPL KVSQKISSRVENLNLPKELMLCHHQ EEGAGEDLDRVYDLMIFFVRENRTQVD HHLCMWMTLLLLKVKWFLKMEYLHQ NGHSKYHRRFLPVVGFQAEEDGVLSTV RGFSHHLL |
| 2280 | 10331 | A | 3213 | 532 | 1232 | |
| 2281 | 10332 | A | 3214 | 8749 | 11698 | CSWHRDFPDWKAGRILISEPSPNRIFAC WGKPAWTGLQLSQGQAVKGNQLLPVS LGRFPSPASNPGGAPGASVAAAAVA AKAAAAAAPVDNAAPHSAKLEERRK PDPRRDFADFGTTIKQDFRLLGQTSVDR LLQLSQGQAVKGNQLLPVSLVKKRKTLP PNTQTASPRALADSLMQLARQVSRLESG QDFADFGTTIKQDFRLLGQTSVDRLLQL SQGQAVKGNQLLPVSLVKKRKTLPAPNT QTASPR |
| 2282 | 10333 | A | 3215 | 3 | 452 | |
| 2283 | 10334 | A | 3216 | 24 | 609 | GIPQTQREPTMVLSPADKTNVKAAWGK VGAHAGVEYGAELERMFLSPFTTKTYF PHFDLSHGFCPLRATGKKVADALTNVA VAHVDDMPNALSALSDLHAHLRVGP GSTFKLLSHLPCW*TLGRPPSPAEPQPLA VARLPWEKFPGLFVEAPLLDLQITPKVG SFGWPLFCPCFPSPSPFLHPYRGL |

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| 2284 | 10335 | A | 3217 | 3 | 583 | EPRLRKAGGLLSRSRQNDQEGREGAQQ WPAYGPARGVVPQPVQTGTWQGN TG QRVPQLPPHPPHILVSRHGRGLRHGFLR PMPEPRGLESGKT/GQCSGCSMYV TMR AKRPWEGGHDILTQQGGCRSSVCGRRR HEALRPRVWCGEQPQWTWCACVCPNRS APGAGLADRPQHPGESRAWGETRLGEAG GAE |
| 2285 | 10336 | A | 3218 | 3 | 398 | |
| 2286 | 10337 | A | 3219 | 1766 | 3896 | NTKLDQAQAPEDHYPISLLPSHMAIG LLMAQEGHCKDSSAMGEEAHHPLTPAT PPFPPLSPDWGHMQPDFVPVAVPAVFR GPPQLQCHGRRLFLNSPCAQKSSGLVV EPGLSRTLLEMVKLTSMRGQFLEAQIPT GISLTLQYQLYQKQTNKNMSYSFVLFLK WVALQGRRAGYPSLEDADSRFNGSR SFLITVIGITLTVEIVTSGMMKGTRVRWS GAGNEGMMGLEEGRNERSVKEAPPRA VEAQPKDRTWDVGKGQGTGEGRGLEV EGQQHQGSEPGTIPFSVSWGVLLLAGLC CLVPPSSLVEDPQEDAAQKTDTSHHQDQ DWEDLACQKISYNVTDLAFDLYKSWLI YHNQAHVLTPTSVAMAFAMLSLGTGA DTRTEILEGINVNLTETPEAKIHECFQOV LQALS RPDTRLQLTTGSSLFVNKSMKLV DTFLEDTKLYHSEASSINFRDTEEAKEQ INNYVEKRTGRKVVLDLVKHLKKDTS LA LVDYISFHGKWKDKFAERIMVEGFHV DDKTIIRVPMINHLGRFDIHRDRELSWV LAQHYVGNATAFFILPDPKMWQLEEK LTYSHLENIQAFDINSINLHFPKLSISGT YKLRVPRNLGITKIFSNADLSGVSQEA PLKLSKAVHVAVLTIDEKGTEATGAPHL EKAWSKYQYVMFNRPFLVIIKEYITNFP LFIGKVVNP TOK |
| 2287 | 10338 | A | 322 | 2 | 373 | PRVRVRVDLVSGWGGKMVDLFVLVTV KRVIDYAVKILVKPDWTGVVSDGVKHS LNPFCDIADVEAVLKEKKLVKEGIACV CGPAQCQETNRTALGMGAHRGHVEVS P**AORLCPLQVARG |
| 2288 | 10339 | A | 3220 | 3 | 1226 | MRRNKPRQGVREARPAGGAGPGWRG ARCSGAGEGGGGERRGSPPAALALAPAS GPRRNFPDARCLIQHQHGAFLLAGSA SLSAVTGVPEGEARFTEDYCPKEKMPGF HKPKMYRSIEGCGISGAKSSSRFTDSKR YEKDFQSCFLHETRSGDICNACVLLV KRWKKLPAQSKKNWNHVV DARAGPS LKTTFEPKVKVTLSGNRIKSTQISKLQK EFKRSNSDAHSTSSASPAQSPCYSNQS DDGSDTEMASGSRNTPVPSFLDLTYWK RQKICCGHIYKGRFGEVLIDTHLFKPCS NKKAAAEKPEEGPEPLPISTQEWTECP DLSLVSWRPPSSLPAGCSLHGLAADW TTDMITVTSKCREPSCQEQSGRQRKA FPKRLPKMAEVQVLLL |
| 2289 | 10340 | A | 3221 | 1 | 269 | |
| 2290 | 10341 | A | 3222 | 240 | 377 | SNTHRVPTFDAAWEVEMVTSLSLQSFLL LPHIHCLKLQ*DPLHSP |
| 2291 | 10342 | A | 3223 | 47 | 263 | |
| 2292 | 10343 | A | 3224 | 416 | 498 | KRLSLQSFLLPHIHCLKLQ*DPLHSP |
| 2293 | 10344 | A | 3225 | 1 | 305 | RTRGRTRGGDGGGHLGSGRNGGSMN APPAFESFLPRG/QRRITINKDTKVPNAC LFTMNKEDHTLGNUIKSRACFPFAFCRD COFPEASATLPVQPAEL |

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| 2294 | 10345 | A | 3226 | 74 | 562 | OSGGGGGHLGSRNGGGGSMNAPPAFE SFLLFEGEKK/SDAGCGGPRTINKDKV PNACLFTINKEDHTLGNIIKSQRDLKDPQ ALFAGYKVPHPLAEHKIIRVQTTPDYSPQ RAFTNRQSPDLISELSLGGSAFRGGHK KTSQERNLSRGARGGLCSGL |
| 2295 | 10346 | A | 3229 | 1 | 2661 | |
| 2296 | 10347 | C | 323 | 303 | 395 | |
| 2297 | 10348 | A | 3230 | 1 | 1454 | |
| 2298 | 10349 | A | 3231 | 1 | 2364 | |
| 2299 | 10350 | A | 3232 | 1 | 1368 | |
| 2300 | 10351 | A | 3233 | 114 | 1473 | VKGDRFGALRFNDPCAGIKLPMTFFTEL EKTILKFIWNQKRIARIKSIQSKNAG GSTLPDFKLYYKATVTKTAWYWTQNR DIDQWNRGTGSEITPHIYNLIFDKPEKN KQWGNDSL FNKWCWENWLAICRKLKL DPFLTPYTINRSRWIKDLNVRPKTIKLE ENLGITQDIGMGKDFMSKTPKAMATKD KIDKWDLIKLSFCTAKETTIRVNRQPTK WEKIFATYSSDKGLISRIYNELKQIYKKK TNNPIKKWAKDMNRHFSKEDIYAAKRH MKKCSSSLAIREMQIKTITMRYHLTPVRM AIJKSGNRCWRGCGEIGTLHCWWD WKLVPQLWKS VWRFLRDLLEIPFDPAI PLLGIPNDYKSCCYKDTCTRMFVALFT IAKTWNQPKCPTMIDWIKMWHIYTME YYAAIKNDEFM/SFVGTWMKLEIILSKL LQEQKTK |
| 2301 | 10352 | B | 3234 | 1 | 1890 | MDKFLDTYTLPRINQEEVESLNRPTGSE IVAIINSLPTKKSFGPDGFTAIFYQRYKEE LVFPLLKLQFSIEKEGILPNSFYEAIIILP KPGRDTTKIENFRPISLMNIDAKILNKILA NRIQHQHIKLIHHDQVGTGPMQGWPN CKSINIIQHINRTDKKNHMIISIDAEKAFD KIQQHFMKLTLNKLIGIDGTLYKMIRTY DKPTANIILNGQKLEAFPLKTGTROGCP SPLLFNIVMELLARAIQKEKEIKGIGLQKE EVKLSLPADD MIRIKYLGILQIRLMDKDLF KENYKPLLEIKEDTNKWKNI PCSWVGR INIVKMAILPKVIYRFNAIPKLPMTFFTE LEKTTLNFIWNQKRARTAKSILSQKNKA RGIMLPDFKLYYKATVTKTAWCWYQNR DIDQWNRTEPSEITPHIYNLIFDKPDKN KQWGNDSL FNKWCWENWLAICRKLKL HPFLTPYTINRSRWIKDLNVRPKTIKLE NLGNTQDIGMGKDFMSKTPKAMATKA KIDKWDLIKLSFCTAKETTISVNRQPTK WEKIFATYSSDTGLISRIYNELKQIYKKK TNNPINKWAKDMNRHFSKEDIYAAQKH MKNNAHHIWPFSECKCKSKHNEIFSHTS* |

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| 2302 | 10353 | A | 3235 | I | 2676 | MKAEIKMFPEINENKDDTTYQNLWDFAK AVCRGKFIALNAHNRKQERPKIDTLTSQ LKELEKQEQTHSKASRRQEMTKIRAELEK EIEIQKTLQKINESRSWFFERINKIDRPLA RLIKKKREKNQIDAINKDKGDIITDPTETI QTTIREYYKHLYANKLENLEEMDKFLDPT YTLPRLNQEEVESLNRPTGPPEIVAJNSLP TKRSPGPDGFTAIFYQRYKEELVPFLK LFQSIEKEGILPNSFYEASIIIPKPGRDDT KKENFRPISLMNIDAKILNKILANRIQQHI KKLIHHDQVGFIGPMQGWFNIRKSNVV QHINRTKHKNHMIISIDAEKAFDKIQPPE MLKTLNKLSDGTLYKIRATYDKPTANII LNGQNLEAFPLKTGRQGHPLSPLLFNIV LEVLAIRAEKEIKAQNLLKLISNFRKV SVYKINVQKSQAFLYTNNRQTESQIMRE LPFTIASKRKYLGQLTRDVKDLFKENY KPLLNEIKEDTNKWNPCSWIGRINIVK MAILPKVIYRFNAIPKLPITFFTELEKTL KFIWNQKRAHIAKILTSQKNKAGGIMLP DFKLYYKATVTKTAWYWYQKRDIQW NRIELSEIPIHYNHLIFDKPDKNKKWGK DSVPNKRCEWENWLAICRKLKLDITLTPY TKINSRWIKDLHVRPKAIKLEENLGITIQ DIGMGKDFTSKTPKAMATKAKIDKWDLI KLKSFTAKETITVRNROPTKWEKIFATY SSDKGLISRIYKELKQIYKKKTNNPIKW AKDMNRHFSKEDIYANRHMKKCSSSL AIREMQIKTTMRYHILTPVRKAIKKSGNN RCWRGCEIGITLLHCWWDCKLVQPLW KTVWQFLRDLELEIPFYPAIPLLGIVPKD Y |
| 2303 | 10354 | A | 3236 | I | 3045 | MDKFLNTYTLPRLKQEEVESLNRPTGS DIEAIINSPLTKKSPGPDGFTAIFYCORYK EE/LEKEGILPNSFYEASIIIPKASDDTK KENFRPISLMNINAKILNKILAKQIRQHIK KLIHHDQVGFIGPMHGLFNICKSVNIQHI NRTNDKNHMIISIDAEKPFDKIQQHFM KTLNKLAKNLLKIGNFSKVSQYKINVQ KSQAFLYTNNRQTESQIMNEFPFTIASKR IKYLGQLTRDVKDLFKENYK |
| 2304 | 10355 | A | 3237 | I | 2142 | |
| 2305 | 10356 | A | 3238 | I | 1551 | MRFKKIHLEHNKEPSEASADGGAVAS YPDLAKIVDEGRYKAEVMQLRCGWRAP ASDCVHSVAVVGVDVLEVLARAIQEQ KEIKGIQLGKEEVKLSLFADDMIVYLENP TVSAQNLLKLISNFSRVSGYKINVQKSQ AFLVTNNQTESQIMSELPFTIASKTIKYL GIQLTRDVKDLFKENYKPLLNKIKEDTN KWKNPCSWIGRINIVKMAILPKVIYRFN AIIHKLPMTFFTELEKTLKFIWNQKGVH IAKSILSKKNKAGGIMLPFHFLYYKATV TKTAWYWYQNRYTQCNRTPESEIPIHI YNIHLMFDKPDKNKKWGKDSLFNKWCW ENWLAICRKLKLDPLTPYTKINSRWIKD LNVRFKPIKLEENLGITIQDIGMKDFM SKTPKAIATKAKIDKWDILKLSFCTAKE TTIGVNRQPTLEKIFAIYSSDKGLISRIY KELKQIYKKKNPIKKWVKDMNRHFSK EDIYAVNRHMKKCSSLVIREMQIKTTM RYYLTPV |

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| 2306 | 10357 | A | 3239 | 1 | 1458 | GLSGDLLGAHQLPDVLGVOPLDILLP PQNLALQSLQDDLLWALDPAAAPWA MDRGAATQWAVGPVVSDFWVMEAVAS LPSAMDLDAAQPTWLLGAASLLVTDQ PMDQPSADQLAEFPDLLSKVYSQSLRIKY LGIKLTRNVKDLFKENYKPLNEIKEDTN KWKNNIPCSWVGRINIVKMAILPKVIYRFN AIPKLPMTFFTELENTTLKFIWNQKRACI AKSILSQKNKAGSIMLPDFKLYHKATVT KTAWYQYQNRDIDQWNGTEPSEIMSHIY NYLIFDKPEKNQKRGKDSLFSKWCVEN WLAICRKLKLDPLTPYTKINSRWIKDLN VRPKIKTEENLVNTIODIGMGKDFMSK TPKAMATKAKIDKWDLIKQKSFCTAKET TIRVNRQPTWEKIFITVPSDKGLIPRIYKE ELQIYIRKKTNNPIKKWAKDMNRHFSK EDYAAANRHMKKCSSSLAIREMQIKTTM RYHLTPV |
| 2307 | 10358 | A | 324 | 268 | 393 | DGRRKEKWHKVERRHRPYLLSSLSQHR W*TVTNFGEISGTIAIEVDEGTIYHALNN GLFTLGAPHK/ERIALKPGYKYSINSD ELVVGRSDAIGPREQWEPVFQNOQVRN GGPAEMGEEKRNGTKWRETDHTSFPPL FPSTGGQPKAHSNWRKVCH |
| 2308 | 10359 | A | 3240 | 1 | 2028 | |
| 2309 | 10360 | A | 3241 | 2 | 1547 | |
| 2310 | 10361 | A | 3242 | 3 | 1945 | |
| 2311 | 10362 | A | 3243 | 1 | 2124 | |
| 2312 | 10363 | A | 3244 | 1 | 2250 | |
| 2313 | 10364 | A | 3245 | 2 | 2483 | GKYYKLSGTAPTCVSLGWGLARGDSA APALGSRTSACAPCSHGTWKLSEPSDR LSPCDRSSEEAHTHAPHRLLALVASLPW SRLPLLAPQSHSEAEATSQPTGVENHHQ KTRYVYKAGGPVICRSLPESRGFLWASEG RKCMLIGSWAAMGRLRKSTISSRFQPT LAGTRGPQAIPLVKKHSDAVLLGVCFLK LLHQHHQELGENADSQTLPTQTHWEFILS EDYNKMTVPVKNYQVLEVLARAMRQEK QIKSIQLGKEEVKLSVFADDMVYLENFI VSAQNLLKLSINFSKVSYGKINVQKSQA FLYTDNRQTESQIISELPFTIPSKRIKYLGI QLTRDVKDLFKENYKPLNEIKEDTNKW KNIPCSWVGRINIMKMAILPKVIYIFNAIS IKLPMTFFTELEKTLKFIWNQKRARIK TILSQKNKAGGITLPLDFKLYYKATVTKT AWYVYQNRQVQWNRJEPSEIPIHINH LIFDKPDKNKKWGKDSLFTKWCWENW LAICRKLKLDPLTPYTKINSTWIKDLNV RPKTIKTEENLOITQDQIGMGKDFMSKT PKAMATKAKIDKWDLIKLSFCTAKET IRVNRQPTWEKIFITVPSDKGLIPRIYKE LKQIYKKKSNPIKKWAKDMNRHFSKED TYAANRHMKKCSSSLVIREMQNKITIR/Y HLTPVRMAIKKSGNNRDMDEAGNHHS EQTIARTENQAPYLLTHRWEIENNENTWT QVEEIHITLGPVGVICRKVPFGNSGSPK SGLHFSQPLPQVTSVAKITIVPWEMKLI AMGVQDELNIAFHKNNHLLMNDTTHMT PYIQAPAKS |
| 2314 | 10365 | A | 3246 | 1 | 2622 | |

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|------|-------|---|------|-----|------|---|
| 2315 | 10366 | A | 3247 | 853 | 2831 | YPESTMNSNKFTRKKQTTPSKSQ*RI*TD TSQKKTFFMQPKDT*KNAQHWSLECK SKPQ*DTISHQLEWRSLSQDRKD*QSTL LAIIKKKKQKKNQIDT/IKNDKEGITTDP EQTTTIREYYKHLTYNKNVENLEMDKFL DTYTLPTLKQKKEVKTLNRPITGSEIFAI NSLPT/KKSPGPDRTAEFYR/DIRSSGQG NQARERNKGYSIRKRGSQIVPCR*HICI FRKPHHLSPKSS*ADKQLQSLRIONQSA KITSIPHQ*QTNREPNE*TPHNCPFEN KMPRNP*TYKGCEGLQGELOTTAQ*NK RGHHRMEPHSMLMDRKNQYRENGHTA QGNL*IQCHPHQATNDFHRIKKNYFKV HMEPKKSPHRQVNPKEQSWRHHTT* LQTLQGYSNQNSMVLVPRQRHRPMEQ NRAPGNNTIHLQSLDL*QI*QKQEMGKG FPI**MVLGKLANHM*KAETGSLPHILYK N*FKMD*RLKC*T*NHKNPRKPRQYHS GHRHGGGLHD*NTKSGNKSQN*QMG N*TKELLHSTRNYHSEEQATYRMGENFC NLLI*QRANIQNLRQT*TNLDKNKQPH QKVVGKGYEQLTKRRHLCSQKTHEKML IITGHQRNANQNHNIEPSHTS*NGDHSN QVRKQQVLERMWRN |
| 2316 | 10367 | A | 3248 | 1 | 4954 | MVFSIDAQKAFDKIQRHFMKLTNKLGI DGYTLKIIIRAIYNKPTGNILNGQKLEAFP LKTGTRQGCPPLSPLFNIVLEVLARAIRO EKEIKGIQLGKEEVKLSLFADDIIVYLENP IVSAQNLLKLIGNFSKVSQYKINQKQSA FLYTNNRQTESQIMSELPFTIASKRIKYL GIQLTRDVKNLFKENYKPLLNEIKEDTD KWKNIPCSWIGRIHIVKMATLPKVIYRLH AIIHKLPMITFFTELEKTTLKFIW |
| 2317 | 10368 | A | 3249 | 25 | 527 | EFHRLRENPPMVAVSCTPTKNVKAAWG KVGGAHAVRSMCAEALERMFLSPTTKT YFPHFDLSHGSAQVKGATGKVCADAL TNAVANVDDMPNVAVRPEATLHAHKL RVDPVNFVKLLKPLACLVDGPAHLPRP SFTPGGATSSLGQSFLGFLKHRCLNLPN YR |
| 2318 | 10369 | A | 325 | 1 | 67 | |
| 2319 | 10370 | A | 3250 | 97 | 1360 | SACAWRLPSGPFSAMWPLWRLVSLAL SQALPFEQGFWDFTLDDGPFMMNDEE ASGADTSGVLHPDVSPTTYSAMCPFGC HCHLRVVQCDLGLKSVPEISPDITLL DLQNNDISELKDDDFKGLQHLVALVLV NNKISKIHEKAFSPRLKLOKLYISKNHV EIPPNLPSLVELRIHDNRIRKVPKGVFS GLRNMNCIEWMGGNPLENSGFEPGAFDG LKLNLVRISEAKLTGIPKDLPETNELHL DHNKIQAILEDLLRYSKLYRGLGHNQ IRMENGLSFLPTREVHLADNNKLAR VPSGFPDLKLLQVV/YILHSNNHOSGVF NEFLFPWGFGEAGPYNGH/ISLFNNPV PYWEVQPATRVVTDRLAIOFGLQKY EAAAATLVSQWGLGNRARHPDGEAEP GS |
| 2320 | 10371 | A | 3251 | 1 | 2535 | |

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|------|-------|---|------|------|------|---|
| 2321 | 10372 | A | 3252 | 5 | 2333 | NPILWLETQMASNERDAISWYQKKIGAY DQOIWEKSIEQTQIKGLKNPKMKMGHIK PDLIDVDLIRGSTFAKAKPEIPWTSLTRK GLVRVVPFPLFSNWQIVQTSIRJFVWLL LLYFMQVIAIVLYLMMPIVNISEVLGPLC LMLLMGTVHCQIVSTQITRPSGNNGNRR RRKLKRTVNGDGSRENGNNSDKVRGIE TLESVPHIGGWETIFGNRIKRVKLISNKG TETDNDPSCVHIPIKRRQCRPEIRMCQTR EKPKFSDGEKCRREAFRLGNVSGDDLS SEEDGEARTQMILLRRSVEGASDNGCE VKNRKSILSRHLNSQVKKTTTRWCHIVR DSDSLAESEFESAFAFSQGSRSVSGGSR LNMSRRDSESTRHDSSETEDMLWDDLH GPECRSSVTSDEGAHVNTLHSGTKRDP KEDVFQQNHLFWLQNSPSSDRVSJIIW EGNECKKMDMSVLEISGIIMSRVNA YQQ GVGYQMLGNVVTIGLAFPPFLHFLFREK SLDQLKSISAEIILTLFCGAPPVTPHIVLSI INFFERLCLTWMFFMMCMVVAERTYKQQR FLFAKLFSHIYFCQKGLGKYHIPHFKK VENIKIWLSLRSYLKRRGPQRSVDVWVS SVFLLTSLAFICCAQVLQGHKTSWNTDA YVNWGVFDLGETALLFLRLASLGSETN KKYSNVISILLTEQINLYLKMEKPNKKE QLTLVNNVLKSTLLKELDTPFRLVYGL TMNPLIYNITRVVILSVSGVSDLLGFNI RLWKIKS |
| 2322 | 10373 | B | 3253 | 73 | 358 | XVPGSRGPETKLWDDFSMSQATKRKHV VKEVLGEHIVPSDQQQIVRVLRTPGNL HEVETAQQQRFLVSMPSKYRKNWIKRG DFLIVDPIEGEK* |
| 2323 | 10374 | A | 3254 | 80 | 201 | |
| 2324 | 10375 | A | 3255 | 498 | 748 | FLPRRGDNDSYPQ/WTKACRRRRTCW* T*TWIRSGQRKMWSCGRSLTTCMP RTRTAARLMACGSGSWRRSGPSCGRL SP |
| 2325 | 10376 | A | 3256 | 1 | 1764 | MTTSQKHRDFVAEPMGEKPVGSLAGIGE VLGKLEERGFDKAYVVLGGFLVLKDD EDLFREWLKDTCGANAKQSRDCFGLR E/WCAKSRPAAEVSELKADSKGEPQAQ PEQERTGL |
| 2326 | 10377 | A | 3257 | 842 | 1186 | FLPRRGDNDSYPQ/WTKACRRRRTCW* T*TWIRSGQRKMWSCGRSLTTCMP RTRAWTTWRSKNLALSCPSMTSKLKS GHIPSAWSRAARLMACGSGSWRRSGPS CGCRLSP |
| 2327 | 10378 | A | 3258 | 526 | 1158 | SCGLSLIKMTTSQKHDFVAEPMGEKPV GSLAGIGEVLGKLEERGFDKGLVYVVL GQFLADIEKMKTSFREWLKDTCGANAK QSRDCFMPFEKWCEALLVDALLGKFSI PPAPQSRSLASRSDDSPSPSYECKD/CY CWRTHLRRYFRGSGFEFSPLNHFQLFQI LRSWHAFPRPFPWPVSVWTVYQLFLE WDFPGPIPHPHHFQSV |
| 2328 | 10379 | A | 3259 | 35 | 407 | |
| 2329 | 10380 | A | 326 | 163 | 552 | AGFSLSAQKSPGAMA*YSYVSKSLVLK GTSKKKKSKDKKRKREDEETQLD/IVGI W*TVTNFGEISGTAIGMDEGTYIHALDN GLFTLGAPHK/ERIALKSGYGKYLGINSD ELVGHSDAIGPREQWEH |
| 2330 | 10381 | A | 3260 | 3859 | 4052 | ASCPNPKEFAPPRAGPPWFGPPLARVN PGVLGGPFGTRPTTPQPLPEQVTLTSTN PWLAASV |
| 2331 | 10382 | A | 3261 | 493 | 712 | AHGRQLRKYSQQQCGSWRLPFCGCHAV SGGGCGKCCISPANGPCGAA/CLGFQPH NFPDPCECTC/CGCHAVSGGGCGKCCISK WSLWCSPAWYSSHTTSRIPVKLAGLPS SFLPG |

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| 2332 | 10383 | A | 3262 | 51 | 539 | |
| 2333 | 10384 | A | 3263 | 742 | 4858 | |
| 2334 | 10385 | A | 3264 | 2 | 658 | AFLRMLFPESWMETRGRGAPAPRSET SHDLVATLMRCPTPHYR*SNPTRPRGPET GRRTA*TRSPQVPHLQHLPTPTRLVTPHP EGTQPTLPTRSSTRWNTWA*RTTSGCES RLRLPPVROQIPAEYAILTPETWPRWRGD EPRASSTCFGRSTWSPTRPDGEHQGLCQ EPRVAFPPGGGAKKRFDGFARTIQKAWR RTWLSGSTRRCCRKLPTSC |
| 2335 | 10386 | A | 3265 | 1 | 4095 | |
| 2336 | 10387 | A | 3266 | 26 | 173 | |
| 2337 | 10388 | A | 3267 | 387 | 1443 | PHRKQAEPPRIHIERI GRRVRHHARHGR GSRPDTAAEAAGCGDPRAFQQLERRL RHPPLRWQGLLRQRLLREPRRSLLR HRADAVQ*PGLPPDALPREAGWRQEGA PQHRRLQDYETCQLTW*PH**GAHPTTS AALNTPRPGPETGRRTESSTRWNTWA* RRTSGCAEPASPTA/SQFAKFLQRYAILTP ETWPRWRGDERIIGVQHLLRAVNMEPD QYOMGSTKVFVKNP/VVAFPPGGGARA KVRWLCPNHPEGLAAPRGCEVVRGDA/R RKLP*TS*TRRSGGATASIGTSSGTWVG WRSQPCSVSSWARRSGWTSPIRSPSTTA ASSPSSGT*S*RP*SVCM*LGERR |
| 2338 | 10389 | A | 3268 | 1 | 4496 | MEGNVNAHRASGAQIRTCRAPPGATGC TALFKANSPEFTGLKSAQRGRGPVVGAP RKRFPSGLRGHREARRTLWGWSQAPPPA AQAHTPAAGDSTLLRLSAVGTCLLYAP HPQDPPAGFLREQWWRLLTLQVFLHL RTGGRGVVDWVLLGGRLGGRHMP GPCNLAEVLLREARWPWGEAGGSEEG EPSGGSVGNCQQRRLPSAHPEAQQGV GLEVGRGMVAPAAASYFADEGRPNAGDH AROPRLGP |
| 2339 | 10390 | A | 3269 | 911 | 2827 | ERKHLGWMEFSIKQSPLSVQSVKCIKM KQAPFELGANGKTPSCVNRRECSVFLS KAQLSSSLQEGVMQKFNHGDALPFAD KLKDLTSRVFNGEPGAHDAKLRFSQ MKIGITPPNTPPKNGSPKILKIKITCYM NGKPLFESSICGDSAADVSQSEENGQKPE NKARRNRKRSIKYDLSLEQLVEAALVS KISSPSDKKIPAKKESCPNTGRDKDHLK YNVGDLVWSKVSQYVWPCMVSAADPL LHSYTKLKQKKKSARQYHVQFFGDAPE RAWIFEKSLVAFEGEGQFEKQCESAKQ APTAKKIKLLKPISGKLAQWEMGIVQ AEEAASMSVEERKAKFTTLYVGDQLHL NPQVAKAEGIAESLGEMAESSGVSEEA AENPKSVREECIPMKRRRRRAKLCSSAET LESHPDIGKSTPQKTAADP/RRRGVGSQ PGRKCTTVSMPFRSRKGDAASQFLVFCP KHRDEVVAEHPDASGEEIEELLSQWSL LSEKQARYNTKFALVAPVQAEEDSGN VNGKKRNHTKRIQDPSENA/DLEDTPRK GLRTDKHSLRKRDITDKTARTSSYKAM EAASSLKQAATKNLSDACKPLKRN ASTAASSALGFSKSSPSASLTENEVK |
| 2340 | 10391 | A | 327 | 289 | 818 | EPSRGVWPHEDARINGSKKKSKDKKR KREDEETQFD/VGIW*TVTNFDEISGTI AIEMDEGTYIHALDNLGFTLGAPHK/ERI ALKPGYGYLSINSDELVV/GRSDAIGPR BQWEPVFQNGACAAVFTVIGSEKQSECS LLRESRAKYHGCTHGQISSSLKQHPRW YSHQEDLKV |
| 2341 | 10392 | A | 3270 | 3 | 114 | |
| 2342 | 10393 | A | 3271 | 328 | 471 | |
| 2343 | 10394 | A | 3272 | 1 | 190 | |

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|------|-------|---|------|-----|------|--|
| 2344 | 10395 | A | 3273 | 2 | 479 | SGLGRLPGPWQOEAGSSRGPSGDMAGV KALVALSFSGAIGLTF/HMLGCALEYDG VYVWPLFVLVFFHAISPPHFAKRVTYDSD ATSSACRELAYFTTIGVIVSCLWISFVIL ARVALIKWACAFVLVAGNAVIFPYN RGFSLYLGRGDDFSWAEQW |
| 2345 | 10396 | A | 3274 | 3 | 586 | ARAMGISRDNLHKKRKTGGKRRKPYHKK RKVELGRPAANTKIGPRRIHTVVRVGGN KKYRAIRLDVGNFWSGECCRTKTRIID VYNASNNEVLRTKILVKNCTVLIDSTP Y RQ/WTPPEEEILNKKRSKKIQKKYDERKK NAKISSLLEEQQQGGKLLACIASRPGQCG RADGYVLEGKELEFYLRKIKARKGK |
| 2346 | 10397 | A | 3275 | 2 | 727 | LFPASAEQMGISRDNWAHKPRKTGGPRE SPYQOEAKSMSLGRPAANTKILAPRIQ HSPVCRGG*QVNTVPLRFDVGNFWSWG/S KECCRTKTRIIDVYVYNAI**PSWVRYPRP LVERICNVLDEQHPYRQWVRSPYALP LGPQRKGAKLDSLRKEEIFKPKTDLK*IQ KKYD*/ERKKNCQNSASLGRSSFFQGGK ASLRCLAFK/RPGQCG/RA/DGYMTRGHR VRSYYLRKIKARQSKINT |
| 2347 | 10398 | B | 3276 | 48 | 209 | XKNQCETRTMOENGYSSHAVDGTGPAG GAGRPAGSTGAQVSVQPNFQDQKFLGR X* |
| 2348 | 10399 | A | 3277 | 2 | 353 | |
| 2349 | 10400 | A | 3278 | 3 | 676 | SAVEFPFSLSHITGTRPRTPILLQENGY FIHTLWMGLALLGVLGDLGQHRPRSP CQPNFQDQKFLGRWFKRGLASNSWL EKKAAALSMCKSVVAPATDGGFNLTSTF LQEKTSVETRTMLQPRGVPSASLQLTG VPHWQGAHYSVSVVETDYDQYALLYT RASKGPGEDFRMATLYSRTOPTARALK EKFTAFCKAQGGTIEDITVFLPQTDKCM EQ |
| 2350 | 10401 | A | 3279 | 154 | 522 | HVACGLLWIYVSPSAHLNDGHTITK/EN LGTVNEILLGSPNTEAELODMINEVMSD GNGTIDFPFELTMMARKMKDITDSEGR KLAEFAFVFLGRVGNGLYLACRNFH VDGOTLGGGSLPD |
| 2351 | 10402 | A | 328 | 213 | 905 | YVQSLKQILSGCI*ESIAIKKKKNDKKR KREDEETQLDIVGIWVTYNFGEISGII AIEMDKGTIHALDNLGLFTLGAPHKEVD EGSPPEQFTAIVKLSDSRLKSGYGYK LGINSDELVVGSRDAIGPREQWEPVFK MGKMLSTNSNCFIRNHEAEDIAKSTKH AGEEEMI/KGSPNLQCTFTFMTLPYLEH RSLLKIRSCAERETKKDDIPEDKGN KQCE |
| 2352 | 10403 | A | 3280 | 1 | 1446 | |
| 2353 | 10404 | A | 3281 | 774 | 3564 | VLKSGNERSQPRSLRLLAPQLKAEAAA DKGLAPVPPFPSSGHSGPCEREGEQGRG RGRSRRGAHLELKPSPLRAGAPTRDGR GGPAEVAAGGRRMVQKESQATLEERE SELSSNPAAASAGASLEPPAAPGEDNPA GAGGAAVAGAAGGARRFLCGVVEEQL MTLISAAREYIEFIYAISPGLDITFSNPKE YSTLKRKLDQVSQFGCRSFALLFDIDH NMCAADKEVFSSFAHAQVSIINIEYQYL G |
| 2354 | 10405 | A | 3282 | 51 | 672 | VLKSGNERSQPRSLRLLAPQLKAEAAA DKGLAPVPPFPSSGHSGPCEREGEQGRG RGRSRRGAHLELKPSPLRAGAPTRDGR GGPAEVAAGGRRMVQKESQATLEERE SELSSNPAAASAGASLEPPAAPGEDNPA GAGGAAVAGAAGGARRFLCGVVEEQL MTLISAAREYIEFIYAISPGLDITFSNPKE YSTLKRKLDQ |

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| 2355 | 10406 | B | 3283 | 506 | 2416 | MNPSAPSPYMASLYVQDLHPDVT EAML YEKFSAPGILSIRVCRDMITRRSLGYAY VNFQOPADAERALDTMNFVVKQKPVRI MWSORDPSLRKSGVGNHKNLNDKSIDN KALYDFTSFGNLSCKVVCDENGSKOY GFVHFETOEAERAIEKMNGMLLNDRK VYVGRFKSRKEREAE L GARAKEFTNVYI KNFGEDMODDERLKDLPKGFOPALSVKY MTDESQKSKGFQFVSFERHEDAQKAVD EMNGKELNGQIYV GRAQKVERQTEL KRRFEQMKQDRITRYQGVNLYVKNLDD GIDDERLRKEFSFGTITSAKVMMEGGR SKQFGVCFSSPEATKAVTEMGRIVA TKPLYVALAQKKEERQAHLTNQYMQR MASVRAPNPNVINYQAPTPSGYFMAAI PQTQNRAAYYPPSQIAQLRPSRWT AQG ARPHFPQNMPGAIRPAAPRPFSTMKPAS SQVPRVMTQRVANTSTQTMGRPAAAA AAAAATPVRTVPQYKYAAGVRNPQQHL NAQPVQTMQQAQVHVQGGQELTASMLA SAPPOEQKQMLGERLFPLIQAMHPTLAG KITGMLLEIDNSELHMLESPESLSRKVD EAVAVLQAHAKEAAQKAVNSATGVPT V* |
| 2356 | 10407 | A | 3284 | 183 | 3080 | PRRCSTGNSGRPKIIRAAEAENEDRTL RLLPGNERSQPSRLRLAPQLKAEAAV DKGLARVPPFSSGHSGPCERECEGQRG RGRSRRAHLELKPFSGLRAGAPTDRI RGGPAEVAAGGRMYQKESQATLEER ESELSSNPAASAGASLEPPAAPAGEDNP AGAGGAAVAAGAGARRFLCGVVEGF YGRPVWMEQRKELFRRLQKWE LNTLY APKDDYKHRMFWREMYSVEEAEQLMT LISA |
| 2357 | 10408 | A | 3285 | 3 | 452 | |
| 2358 | 10409 | A | 3286 | 26 | 526 | NSTDSETHPWLSPADKTTVK/APAWG KVGHAAGEYGSEALERMLFSPTTKTY PFHFDLSHGFCPLRATGKKVADALTKR RGAPLDDMPNALVRPLSDLHAHLKRV GPGSTFKLLKPLACLTLTGAHLPSPST PGGCKASLGQSLGFLLLKRLNLPNYR |
| 2359 | 10410 | C | 3287 | 410 | 484 | |
| 2360 | 10411 | A | 3288 | 3 | 170 | IRGSVVLNLNLLNTFFTP*RSFITSVMF* KPFIFSFLMLLL*VFIFSLKILSY |
| 2361 | 10412 | A | 3289 | 831 | 1559 | IAWAFKINWLPIILFISLVYFMFGHFFYL LYFSNTCLSLFFHLSLETLDNIFLYLSIF QESSKFVHFAISFMFPLSFFCFILSRFKF IFFSSKKYVFILFISLSPNFF |
| 2362 | 10413 | A | 329 | 133 | 480 | GYORRSVKVRAWARCTGFSPKTPNPVW NSQHFQRLRWADHLRSVIRDPGQHGE TLSSLKIQKLPGCCGRCL*FQLFRLRQE N*IRLNPGGGGCSELSHICTPAWVTEQ DSVSK |
| 2363 | 10414 | A | 3290 | 253 | 414 | |
| 2364 | 10415 | A | 3291 | 3 | 225 | |
| 2365 | 10416 | A | 3292 | 218 | 602 | SFLLLPRACTAEKQRWGHQQLYVSWHPR KFGQOIRSICRVSSNNRHGLURKYGLN MCRQCFRQYAKDIRFHL SWTCCSFRGL SGASTSMKKPWINSFVYIIHFEKATEKK RKKNKIRGPFCFKGPL |
| 2366 | 10417 | A | 3293 | 33 | 494 | |
| 2367 | 10418 | A | 3294 | 1 | 609 | PLKRSDCGNDGRTPRPPTRPDTTFTSNL KQTRMVHLTPEEKSAVTALWGKVNNDV VGGEALGRLLVVPWPQTFESFGDLST PDAVMGNPKVKAHSSKKGRGAFSDGL AHLNDNLKGTATLSELHCDKAAPWIPE ELQAPWATCLVCVAVPITFGKRISTPPV AGLPNOENWLAWCWLNALGPTSNHLSL |

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| | | | | | AFLAGPISN |
| 2368 | 10419 | A | 3295 | 8 | 519 |
| | | | | | SAQMAVTTADPRVPRVTRQCLSLASLI QTLVLHLTPEEKSAVTA/WGKVNVD/ VGGKALGRLLVVYPWTQRFLESFGDLS TPDAVMGNPKVKAHSKKVLGAFSGGP GCTWDNLKGTFAHTEVSLHCDKILHRGS LKNFRLLQRAWWSVVAIPHWFQKNFN PTSCRLA |
| 2369 | 10420 | A | 3296 | 3 | 333 |
| 2370 | 10421 | A | 3297 | 35 | 717 |
| | | | | | RRSSPSLLPLAERGGARARGRPERAPHPS TPATRTAPPPWARRMMKLKSNQTRTYD GDGYKKRAACLCPSESEEEVLLVSIS RHPDRWIPWKEGMEARKEAKCGKQ VREYCEGRGQVKGTLGRLVGIFENQER KHRTYVYVLIWTEWLEDWEDSVNIGR KREWFKIEDAIKVLQYHKFVQASYETL RQGYSANNGTPVVVATTYSVSGFRASMF RAFRWT |
| 2371 | 10422 | A | 3298 | 81 | 426 |
| | | | | | PSFHYAVLPLIINCLGFPPSLRHRWLHSM TDDPPTTKPLTARKFIWTHKFNVTGPQ NNMYLILPLERRFRSGHLQHLTSKDNE EQLKHAKYGAFHVITLLFTIHYNSQLKL CD |
| 2372 | 10423 | A | 3299 | 180 | 484 |
| | | | | | RQQAIFWHRWLHSMDDPPTTKPLTAR KFIWTHKFNVTGPONNMYLILPLERR RSGSHLQHLTSKDNEEQLKHAKYGAFH VITLLFTIHYNSQLKCD |
| 2373 | 10424 | A | 33 | 200 | 559 |
| | | | | | KNFFLEMEF/SVLLPRLCNGVISAHRR LRLPLSSYPASSSQVAGDYRACITTAG* ILYF**ETGFLHVGQAGLEFPTSGDPAL ASQSGAGITGVSHCPQLKKSILHETPKGLT GVTS |
| 2374 | 10425 | A | 330 | 27 | 201 |
| | | | | | LQE*SRRPSRSEAADLHGECYSS*GSTSG VVCSSRWARGLAGLRSEAADLRSEYYSS |
| 2375 | 10426 | A | 3300 | 591 | 942 |
| | | | | | MAKTHFWDVDGSMVPPPEWHRWLHSM TDDPPTTKPLTARKFVWDGTFKQFGLG HPRNNMYLILPLERRFRSGHLQHLTSK DNEEQLKHAKYGAFHVITLLFTIHYNS QLKCD |
| 2376 | 10427 | A | 3301 | 1 | 508 |
| | | | | | NFALEAKNSARAISYVQTPMGHFTRG PRLTITSLWGKVNVDAGGETPGKGL VVYPWTQRFDFSGNLSAFCPSWPTP KVKAHGKKVLTSLGDAIKSTWDDLK HLLPKPEVNCTVDKPAWMDPENFKAPG EMLLVTRFGQSLFRQKNFTPEGCRASLG KKDG |
| 2377 | 10428 | A | 3302 | 3 | 452 |
| 2378 | 10429 | A | 3303 | 1 | 627 |
| | | | | | TLLVPQDSERTHPWLLSPADKIVNVA WGKVGAAHVRKMCBAELERMLSPFTT KTYFPHFDLSHGSAQVKGATGKKVAD ALTKRRGAPLDDMPNALSSALEATLHA HKLARVGPSTSKLLKPLACLVDPGPAHL PRPSTPGGCVFPGTKFPLFVEAPPLE PSKLPKLKLSLRIAVFLPLWGFPPAPPL SCTRTPVVFEIKS |
| 2379 | 10430 | A | 3304 | 131 | 406 |
| | | | | | EAMGILKQVFLIVLSVALNHLKATPIES HQVEKRKNCATCATQRLANLHVHSSN NLGGHLSSTNVGSNITYGKRNAVEVLKRE PLNYLPL |

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| 2380 | 10431 | A | 3305 | 154 | 1702 | IGHRDPARGRCSCRGYVSRMVECEKLAP QSEMASAGVSLRATILCLLAWAGLAAAG DRVYIHFFILVIHNESTCEQLAEANAGK PKDPTTIPAPIQAKTSPVDEKALQDQLVL VAAKLDTEDKLRAAMVGMLANFGLGFP YYMGMHSELWGVVHGATVLSPTAVF GTLASLYLGALDHTADRLQAILGVPWK DKNCTSRDLDAHKVLSALQAVTGLLVAP GRADKQAIQLLULSTVGVGFAPGLHLK QPFVQGLALYTPVVLPRSLDFTELDVAA ETIDRLMAQAVTGWKTGCSLTGAKADST LAFNTYVHFQGMKGFSLAEFQEFVW DNSTSVSPMLSGMGTFFQHWSDIQDNF SVTQVPFDTSAFLLLIQPHYASDLDKVE GLTFQONSFNWMRKLPKRTIHLTMPQL VLQGSYDLQDLRPGSSCPFLHTELNIL GRISGNDRIRVGEVLNSIFFELEADEREP TESTQNLNKPVELEVPITRPPFLFAVYD QGATALALSWGRVGKPA |
| 2381 | 10432 | C | 3306 | 223 | 417 | |
| 2382 | 10433 | A | 3307 | 3 | 742 | HEASCSERRRQMADFDTYDDRAYSSF GGGRGSRGSAAGHGSRSQKELPTEPPYT AYVGNLPFNTVQGDIDAIFKDLIRSIVR LVRDKDTDKFKGFCYVEFEVDSLKEA LTYD/GALLGDRSLRVDAIEGRKQDKGG F/GPRKGGPDDRGFRDFFLGGRG/GLSR PGDRRTGPPMGSRRFRDGPPLRG/SNMD REPTEEERAQRTTTPALKPRTVATPLNQ VANPNSSUPFGARPREEVVOKEQE |
| 2383 | 10434 | A | 3308 | 1 | 861 | |
| 2384 | 10435 | A | 3309 | 1 | 2076 | |
| 2385 | 10436 | B | 331 | 396 | 809 | MAGCSRALPHGEAAKQKRVTAAGAP GAKHLTAWGQGQLATPSVGPAPETHHT QNSHWPASAVCSPSSRLRLSHTYPOAE GAGSGLGQPRKGLPQCSSRLKGSSAAK VGAQAEVPRASEACEGQHAVTSHKY * |
| 2386 | 10437 | A | 3310 | 34 | 657 | SDGRCGRCCAPRAPRAMHMSFAIS/CA FYQLLLAALMLVAMLQLLYSL SGLH GQEEQDQYFEFFPPSPRSVDQVKAHVRT ALASGGVLDVSGDYRVVYRGLKTTMD PNDVILATHASVEQTCLEHSLERW EGPAVPCSVFAATKEEAQLATVLAVAL SSHCPDMPARVAMHLCVCPSEYEAAPD PREPGEFALLRSCQEVFDKLARVAQPGI NYALGTNVSYPNLLRNAREGANYAL VIDVDMVPTEGLWRGLREMLDQSNQW GGTALVVPFAEIRARRMPNKNELVQ LYQVGEVRPFYVGLCTPCQAPTYNSRW FNLPEESLLRPAYVVPWQDPWPPVYAG GKVPNFRSSGFRQYGFENRISOACELHYG GDFEVLNIEGLVHKGFELKALKFHPQK EAENQHNIKILYRQFKQELKAKYFNSPR RRVQLATVLAVALSSHCPDMPARGRA PRVPLALRGSRARPPGAGGVCAAVLPG GL |
| 2387 | 10438 | A | 3311 | 160 | 441 | |
| 2388 | 10439 | A | 3312 | 107 | 691 | RTAILSRMKIFLVLALLGVERASSLA MCFSCNLQKSNLYCLKPTICSDQDNYC VTVSASAGIGUNLVTFGVHLSKTCFPC APFPEGRSMLGVASMGHSAFCQSFVAI FSCGPMAGLRGKRSPLLGARACCLSLAG RALLRFGPLDRPEPCSPDPAQEGKPSPF WIPQCMGAPDSSRALICALGPRSG |
| 2389 | 10440 | A | 3313 | 388 | 525 | |

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|------|-------|---|------|-----|------|---|
| 2390 | 10441 | A | 3314 | 194 | 1131 | POHGGHFFPRIKISCWOARPLEDEATLG QCGVEALTLEVTRPACLEVKSMYPWP VLEKVRGOTPKVAKIHEKKKKKTORAK RRMOYNRRFVNVPFRGKKGGTTFKIF VVGLEPYHTDASLKKYFEGFGDIEEAVI TDRQTGKSRGYGFVTMADRAAERACK DPNPIIDGRKANVNLAYLGAKPWCLQTG FAIGVQQLHFTLQRTYGLTPNYMYPPAI VQATVVIAPAPVPSLSSPYIEVTSPASPAY AQYPPATYDQYPYAASPATVRSFVGYS YPAANVQALSAAPAGTITFLQYQAPHV QDPRMH |
| 2391 | 10442 | A | 3315 | 1 | 407 | DAERQEA LGIVRIGTDTAATEPAGAT VPAAAAAARIGTVGPQPAMPRRKRNA GSSSDGTEDSDFSTDLEHTDSSSDGTSR RSARVTRSSARLSQSSSRISRSCSKGSL ALRSLLTLPPE*PVVSSSLPQ |
| 2392 | 10443 | B | 3316 | 78 | 316 | XSYYLQGWPRDADGAFCTCTNDKATQT PLSWQOELEGERASSCAHKRSASWGSTD HRKEISKLKQQLQRTKLSRSKEKERX* |
| 2393 | 10444 | A | 3317 | 1 | 2319 | GHPAFLEDGSPSPVLAFAASPRPNHSYIF KREPPEGCEKVRVFEEATTRGKYGEGAK QETITFALTIVFIQCVINAVFAKILIQFDD TARVDRTRSWLYAACSSISYLGAMVSSNS ALQFVNYPTQVLGKSCKPIPVMLLGVTL LKKKYPLAKYLCVLLIVAGVALFMYKP KKVVGIEEHTVGYGELLLLSLTLDGLT GVSQDHMRAHYQTGSNNHMLNINLWS TLLGMAVSCPDQGPPELVPRCPVQALE KPS |
| 2394 | 10445 | A | 3318 | 845 | 1343 | LSLGDQAQCLLPHASWCQVAGHPAFLE DGSPSPVLAFAASPRPNHSYIFKREPPEG CEKVRVFEEATS/RRVLTGFLTSCPDKN KVHFQPTGSAFCPVNLMKPLPFGMGFIF RNCPSNPGISSPGOPQATTSESGSLQG LPTAIRAMAVAPHLQMSLCFSRAP |
| 2395 | 10446 | A | 3319 | 44 | 498 | |
| 2396 | 10447 | A | 332 | 130 | 249 | |
| 2397 | 10448 | A | 3320 | 1 | 164 | |
| 2398 | 10449 | A | 3321 | 2 | 438 | ARAARVFLHRSSLNLNNGETESVKTMI VHDDVESEPAMTSPKEGTLIVRQTQSASST LQKHKSSSFTFPIDPRLLQISPSGTTVTS VVGFSQDGMPEATRQDPTRKGSVVNVN NPTNIRPQSDPPEIRKSGK*L*ILGAGLW |
| 2399 | 10450 | A | 3322 | 3 | 174 | |
| 2400 | 10451 | A | 3323 | 2 | 4978 | RRTSAVSRLLFMSFVQPLQPPVHLIT ARVRVPGYLQIDGVKIEHNGKLMNCF KTKMTYYSFMKCVGLPAQLTIGFSGPSR ETGSDPRAARRGEDPQSKDRDGLSEQT EAQRSVGHVCPRSQVLGELAGQSPRIPA ALRVCLYLLCITSYNHTSKDESSKDEEEE IKLEINMLKKYSHRNATYVYAFIKKSP PGHDDQLWLWMEFCGAGSTDLVKNTK GNTLKEDWIAYSISREILRGLAHLHHHVI HR |
| 2401 | 10452 | A | 3324 | 197 | 332 | |
| 2402 | 10453 | A | 3325 | 1 | 1788 | |
| 2403 | 10454 | A | 3326 | 3 | 111 | |
| 2404 | 10455 | A | 3327 | 220 | 423 | HEELKSGPYLLTFRDCFLHFVALVSKR /ALNFM*TSAPT*KALSKRNCLVNKNR NIKIPYPKKKKK |
| 2405 | 10456 | A | 3328 | 273 | 499 | RSQVDRDQPGQHKITSLKIQKLARRGG ACL*SQLLRLRLOENRLNPGGGGCSEPR SCHCTPAWETEQDSISKIK |
| 2406 | 10457 | A | 3329 | 1 | 1176 | |
| 2407 | 10458 | A | 333 | 1 | 3408 | |

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| 2408 | 10459 | A | 3330 | 245 | 394 | |
| 2409 | 10460 | A | 3331 | 458 | 701 | GPAPTRRGPAHPGAIHTR**PAGTARAAC OSA*SGATASPAHKKGKGGHPGSRASGTG PGPCQRRRSDHSSAGKWPLREASL |
| 2410 | 10461 | A | 3332 | 365 | 814 | AALRSSESSSRHSLVKMSDKKAKDPV NKGSGGQPKRKNWSKGKSSGTSFNNL VLFDKATYDKLCKEVPNYNLITPAVGSE RLKIRGSLGGQKPFQELLSSKGFIPNWFS KHRASSYFTPGITKGQVAPSLLEDGCMN RSNPPVHLEK |
| 2411 | 10462 | A | 3333 | 41 | 565 | APSPRRPWGHFTTEEDKATIKNLWGKGE MWKDAAGKPNWERLPWLSYPMGPQR FDQLLANLSLCPIMGNPPKVKGTWPR KVLTSLSGSAHKSTWDDLKGHLLPKPEV NLHCDKAMPWDPENFKAPGEMLLVTR FGQSHFRQKNFTPGGCRASWGRKMGDL ELASALVPSRYH |
| 2412 | 10463 | A | 3334 | 399 | 592 | KCIHFPGPPTKFCVGVIVVTAVP/TFGM* TVYV**LPFSLAQNVG*RDDCDPGWKL NLFYAKKKK |
| 2413 | 10464 | A | 3335 | 28 | 312 | |
| 2414 | 10465 | A | 3336 | 26 | 417 | |
| 2415 | 10466 | A | 3337 | 16 | 3567 | |
| 2416 | 10467 | A | 3338 | 6385 | 6599 | |
| 2417 | 10468 | A | 3339 | 2 | 758 | |
| 2418 | 10469 | A | 334 | 3 | 443 | SFQGGLEGEAWAGTGAAPGACGPAPVP GGRRLRGPRTRPAGPTGPGQ*G/VLAPGP AAAVL/RFLTGP*LPSSRARDREGLQLH S*SQRDHEPTGRN/GTTPDAPP*EL*HS PRSAASLCPQAPAEVSPQGSQVPALSGNSP QRLLLT |
| 2419 | 10470 | A | 3340 | 116 | 627 | |
| 2420 | 10471 | A | 3341 | 1830 | 2259 | |
| 2421 | 10472 | A | 3342 | 1 | 619 | |
| 2422 | 10473 | A | 3343 | 1830 | 2258 | |
| 2423 | 10474 | A | 3344 | 290 | 1377 | RSFRAIGEVGSIRGWGGGYAAQLQSPSR LPVLGGGKKGSGRGVGGQSSRAEVGLG SQRERSGTGCAEAAAAAQLIAGTSSSL PYQPGQNGQTAIAPTCAPLSPCKAAAVI MGNIFGNLLKSLIGKKEMRIIMVGLDAA GKTTILYKLKLGIVTTIPTIGFNVETVEY KNISFTVWGCGVARDKURPLWRHYFQ NITQGFIDLWSDSNDRERVNEAREELA MKNAGAETSLRDVLLVFGQTNRICPN AMNAAGQDKLGLHSLRHRNWIYQAT CATRGNGLYEGHLWLANSPKQEVESR TALTKHSTSLTYLLSPCQFLPLLSMOG LARA W GIMTSLPSRTLPPLTSLPFCPP1 |
| 2424 | 10475 | A | 3345 | 292 | 574 | VTTENS GGQTQCGKQDRIQVPRHPARRG PPGSQY/PVTPPVPGPIHATQLPPGPPL GKRKAGQERRLDPRPTTCQAAAPTSSP FCPPQKVVWR |
| 2425 | 10476 | A | 3346 | 3 | 142 | TISSIRKARKPQDILLNNYTPRSSPLRSSG RTRMYKGNVRPGNSS |

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| 2426 | 10477 | A | 3347 | 1 | 1418 | MAAALFVLLGFALLGTHGASGAGEERA RKQPCGKSRFQGHSEGLATRFSAAGNTG FVQAPLSQQRWVGGSVELHCEAVGSPV PEIQWFWFEGQGNPTCSQLWDGARLDR VHIHATYHQHAASTISIDTLVEEDTGYE CRASNDPDRNHLTRAPRVKVVRAQAV VLVLEPGTVFTTVEDLGSKILLTCSLND ATEVTGHRWLKGGVVLKEDALPQKTE FKVDSDQWGEYSCVFLPEPMGTANIQL HGPPKVKAVKSSSEHINEGETAMLVCK ESVPPVTDWAWYKITSSEDKALMNGSE SRFFVSSQGSELHIENLNMEADPGQY RCNGTSSKGSQAIITLRVRSHLAALWPF LGIVAEVLVLVTIIFYEKRRKPEDVLDAL RRCTWPGLMSCPEPLGVTEGRAGSTDA PARGLSGASADRLSSRPLFHGGGPPSSD DAGSAPLKSSGQHNDKGNVVRQNNSS |
| 2427 | 10478 | A | 3348 | 3 | 896 | SCRGRRRQRLEVVRGFRRGIGIMAAALF VLI.GFALLGTHGASGAAGTVFTTVEDL GSKILLTCSLNDASATEVTGHRWLKGGV VLKEDALPGQKTEFKVDSQWGEYS CVFLPEPMGTANIQLHGPPRVKAVKSS EHINEGETAMLVCKSEFVPPVTDWAW YKITSSEDKALMNGSESRFFVSSQGR SELHIENLNMEADPGQERCNGTSSKGL RPRPLQFLRVRSHLAALWPF LGIVGIEVL VLVTIIFYEKRRKPEDVLDLDDDAGSAPL KSSGQHNDKGNVVRQNNSS |
| 2428 | 10479 | A | 3349 | 870 | 997 | KWASNTYVISSNEESMIS*LSGRQ*NLRV WRLRKTWWLNLWT |
| 2429 | 10480 | A | 335 | 2 | 306 | |
| 2430 | 10481 | A | 3350 | 2 | 225 | GILKGLYYPLATNSFPATCWRL*VSPAHS KDPRNAATVHLSFFSPSGGPRYLLGHTT WQQQLGKRGRTEQHS |
| 2431 | 10482 | A | 3351 | 1 | 336 | |
| 2432 | 10483 | A | 3352 | 1193 | 2524 | SKPPAASFAPRRPPATSRTLSAACAFRR CRLAACSFVRPLPHTDTNMNGQLNGFH EAFIEEGTFLFTSESVGEHPDKICDQIS DAVLDAHLQDDPAKVACETVAKTGMI LLAGEITSRAADVQKVVRVAVKHIGYD DSSKGFDYKTCNVLVALEQQSPDIAQGV HLDRNEEDIGAGDQGLMFGYATDEEE CMPLTIVLAHLKNAKLAELRNGTLPWL RPDSKTQVTQVYMQDRGAVLPIRVHTIV ISVQHDEEVCLEMDRALKKEVIVKAVVP AKYLLDDVTYHLQPSGRFVIGGPQDAG LTGRKHIVDTYGGWGAHGGAFFSGKDY TKVDRSAA YAARWVAKSLVKGGLCRR VLVQVSYAIGVSHPLSISIFHYGTSRKSE RELLEIVKKNFDRPGVIVRDLDLKKPIY QRTAA YGHFGRDSFPWEVPPKKLY |
| 2433 | 10484 | A | 3353 | 346 | 461 | |

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| 2434 | 10485 | A | 3354 | 3 | 1632 | MTEQLEPILMQAFIKSTAGLEARKLKAY RTMEYMAKSTDSPGHILCCBCGVPISP NPANICVACLRSKEDISQGIKQVSI\$FCK QCCQRYFQPPGTWQICALESRGTFLLWCL EKNPKPLWSKVRLVDAGVFWTEPHFK RLKVKLLTIQKEVMNGAILQQVFVVDYV VQSQMCGDGHESEKLDWFKLAVIQVR QKTLHKKTFFYLEQLILKYGMHQNTLRI KEIHDGLDFYSSKQHAQKMFVFLQCT VPCRYKASQRLISQDIHSNTYNYKSTFSV EIVPICKDNV VCLSPKLAQSLGNMNOIC V CIRVTSIAHILDPNTLQVADIDGSTFW HPFNSLCHPKQLEEFIVMECSIVQDIKRA AGAGMISKHHTLGEVWGTEGHLEMMNY RIKQYFCRTVHLGTSCLNPGDRLVGLFDL ANCNLNDEHVNKMNSDRVPDVVLKKS YDRTKRQRRRNWKLKELARERENMDT DDERQYQDFLEDEAIRKNVNIYRD SAIPVESDTEDEGAPRISLAEMLEDLHFS PGCLPVKEGASMLT |
| 2435 | 10486 | A | 3358 | 231 | 877 | PKPGGYSQCRITSSRATERNRIDYVSSA VPYLTTPPDLPRPEVVFGRSNVIGKSS IKALFSLAPEVEVRVSKKPGHTKKMNF KVGKHTFVVDMPGYGFRAPEDFVDMVE TYLKERRNLKRTFLLVDSVVGIOKTDNI AIEMCEEALPYVIVLT.KIDKSSGHLK QVLHIQKFVNMKTQCGFPQLFPVSAVTF SGIHLRCFIASVTGSLD |
| 2436 | 10487 | A | 3359 | 3 | 234 | PCQSFQPSGFGKDRPTSLERQSRERQA AIFAVSOPSLVIPPGTGKSEVNADRSRP AYCSNLGRYSGPPSLVIPPGTGKSEVN ADRSGBPAYCSNHFP\$ALP**RSMRSL LQOTSAWTCRHFTSFELQ/RGGSQILT AFCAPAGPTPRGSHVLGLAPSEALT |
| 2437 | 10488 | A | 336 | 243 | 748 | QSGDLGGRLSRSENC\$ORVVRHVVGA VMAGVLKKTGLVGLAIVCNTPHERLR ILYTKLNDVLEIIPKNAAYRKYTEQITN EKLAMVKAEPDVKKLEDOUQGGQLEEE VILQA\$EHELNLAKKK*GEWKLAWPELV E\$EPPADQWKWANIILKTLVVF\$MGKLD VIKIFCYI |
| 2438 | 10489 | A | 3360 | 25 | 546 | YAGFSL\$AQKCPGAMAE*SYAKSTKLVL KGTKTKSKKKK\$KEKKRREDEETQF D/IVGTIAIEMDEGTIYHALDNGLTLGAP HIKEGK\$MALLASNGCFIRCNEAGDIEAK SKTAGEEEMIT |
| 2439 | 10490 | A | 3361 | 2 | 367 | DGRRKEKWHKVERRH\$PYLLSSQHR W*TVTNFGEISGTIAIEVDEGTIYHALN GLFTLGAPHK/ERIALKPGYKYL\$N\$SD ELVV/GRSDAIGPREQWEPVFNQ\$EVRN GGPAEMGEEKRNGTKWREDTDHTSFYL FPSTGGQPKAHSNWRKVCH |
| 2440 | 10491 | A | 3362 | 268 | 393 | IVTNFGEISGTIAIEMDEGTIYHALDNGL FTLGAPHK/ERIALKSGYKYLGIN\$DEL VGHSDAIGPREQWEH |
| 2441 | 10492 | A | 3363 | 6 | 223 | IVTNFGEISGTIAIEMDEGTIYHALDNGL FTLGAPHK/ERIALKSGYKYLGIN\$DEL VGHSDAIGPREQWEH |
| 2442 | 10493 | A | 3364 | 329 | 877 | RPWKQDRRAGDPWPRTH\$FRSSEASLQ ASACKKK\$KEKKRREDEETQDFM\$F GIW*TVTNFDEISGTIAIEMDEGTIYHALD NGLFTLGS\$TQRRIALKSGYKYLGIN\$SD ELVV/GRSDAIGPREQWEPVFNQ\$GACAA VFTVIGSEKQSECSLLRESRAKYHGCTH GQISSLLQHPRWMY |

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| 2443 | 10494 | A | 3365 | 97 | 704 | AGFSLSAQKCPGAMAE*SYAKSTKLVLK GKTKSKKKSKSEKRRKREDEETQFD/ VGIW*VTNFDISGTIAIEMDEGTGYIHAL DDGLFTLGAHPHKEGKMALLASNGCFIR CNEAGDIEAKSTAGEEEMIKIRSCAERE TKKDDPLEEDKGNVQCEINYVKFQ SQEHKLKSKEDSKILKAQKQDGLFHET LLDR |
| 2444 | 10495 | A | 3366 | 24 | 981 | AIQRLGEDGGFYRDVGCQGVFISRP FLRAPVLPRLTYSSRTGLSLSAQKLP MAEYSYVKSTKLVLKGTGKTSKKKSK DKRRKREDEETQLDIVGIWWTNFDGE ISGTIAIEMDKGTIHALDNGLFTLGA HKESDEGSPSPPEQTAWKLSDSRIALKS GYGKYLGIIRDGLVVGSRDAVGPREQW EPVFKMGKMLSTNSNCFIRINAEADIE AKSKTAGEEEMIKIRSCAERETKKDDIP EEDKGNVKNCEINYVKFQSPQDHKLKI SKEDSKILKARKDGLFHETLMDRRAK LEADRYCK |
| 2445 | 10496 | A | 3367 | 1 | 555 | PLKRSDDGNDGRTPRPTRPDVTFTSNL KQTRMVHLTPEEKSAVTALWGKVNVD EVBGKALGRLLVVPWTQRFEISPGD LSTPADAVMGNPKVIAHGKVKLGAFS GGPGCTWDNLKGTFAHTEVSLHCDK/LH RGLSNFRLLGNVVLGCLLAHSLGKEF QPHQLQACLIKIGVLG |
| 2446 | 10497 | A | 3368 | 1 | 390 | WEEIQELNEVARHRPSTLVMGIQOENR QIRELQOENKELRSTLEEHS ALELMSK YREQMFRLLMASKDDPGIIMKLKQHS KELQAHVDQITEMAAVMRKPLKLTNSR VARNKNEYFNILNKTKA |
| 2447 | 10498 | A | 3369 | 769 | 912 | FPTPIPLFQELQAHVDQITEMAAVMRK LKLTSNRVARNKNEYFNILK |
| 2448 | 10499 | A | 337 | 514 | 967 | APACCPAAVSPFLCEPTLIHPHPDPLKE DTGQKHRGAQSHPTLAGAGLAGRSSKQ PSPSAISVHSDAGTSSCDRRQQCDRLPS ALLSPHLRCSQAPATROLESS*TPPGTADL FLASSGPNPRAFSNARSVRCKATSEKS KPKSYQGS |
| 2449 | 10500 | A | 3370 | 1 | 463 | MKKNIAPL LASMVFVSIATNAYADIQMT QSPSSLSASVGDRVITTCRSSOSLVHIG NTYLHWYQOKPGKAPKLLIYKVSNRFS GVPSRFSGSGSDFTLITISGLQPEDFAT YYCQHYDSLPTYTGGQGTLEUKRTVAA PSVFIFPAHLMSS |
| 2450 | 10501 | A | 3371 | 2 | 166 | |
| 2451 | 10502 | A | 3372 | 39 | 1200 | PCGVAAQLEIQVALNFIISYLYNKLPRR RVNIFGEELERLKKKYVEGHWYPEKPY KSGFRCHIGEKVDPVIEQASKESGLDI DDVRGNLPQDLESFRIDPFEVSYQIGEK GPVKVLYVDDMNENGCELDKEIKNSFN PEAQVFMPISDPASSVSSSPPPGHSAIA VSPITFMRSTQPLTFTTATPAATKPGST KWMKNSG/RGSSRFARTSPINLRGMWN DLLEGRKAISSSMHSLYGLGLGQQQP QQQQQAQPPPPPPPPQQQQQKTSALS PNAKEFIFPNMQQGSSTNGMFP/GDSP LNLSPQLYSNAFDVFAITYGGLNEKSFV DGLNPSLNNMQYSNQFQPCYGLTKKK KMYRTKLKCTGPRGIFFSP |
| 2452 | 10503 | A | 3373 | 1 | 1197 | |
| 2453 | 10504 | A | 3374 | 66 | 632 | RRDPRTANMALRVVRSVRALLCTLRA VPLPAAPCPRPWQLGVGAVRTLRTGP/ ALLSVRKFTKQESGNNQKSMNQLGS GNFAQEA LGDVVYCSLPEVGT/LNKQ/ DEVGALESVKAASELYSP/LSGEVTEIN/E AL/AENPGTCKTNFCYEDGW/LKMTLSN P/SELDELMSEAEYKIKSIEE |

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| 2454 | 10505 | A | 3375 | 162 | 552 | VASEHSPKIGASQGLDYEPLLVAKVWVY LTRPTGTKAGVSQYLPLEFEGILGPAS LPWLRQTLTQKEIEIDIEPTDKVERIKER VEEKEGPPQQRLLHLQVAKQMNDK TASWITKILRWVQSQT |
| 2455 | 10506 | A | 3376 | 77 | 427 | GRDKEGEYPPAFSSGWGKSVGIML TELE KALNSIIDVYHKYSLIKGNFHAYVRDDL KKLLETECPQYIRKKGADVWFKELDINT DGA VNFQEFLLVIKMGWQPTKKAMKK ATKSS |
| 2456 | 10507 | A | 3377 | 1 | 143 | |
| 2457 | 10508 | A | 3378 | 200 | 899 | GKSTGPVCVHMSLCEWTL SLATRVSLSS HPSHQSHSHLLVWLFGESEPPGQGLRLGH ESSAYCPGQMIPCHGIPQKVLFFRWGK SVGIML TELEKALNSIIDVYHKYSLIKGN FHAYVRDDLK LLETECPQYIRRVRRGLG WRGLSAWSWGPCGPAVLPA TLHRWLCL GSL*DL*TLASSSILTKKGADVWFKEL DINTDGA VNFQEFLLVIKMGWQPTKKAM MKKATKSS |
| 2458 | 10509 | A | 3379 | 99 | 497 | RESGGKRLNIYHQT VYHKYSLIKGNFH AVYRDDLK LLETECPQYIRKKGADV WFKELDINTDGA VNFQEFLLVIKMGW QPTKKAMKESHKGVSLSLGPGK WAL GGHVTCRIKVINTSKKKKVDA |
| 2459 | 10510 | B | 338 | 1 | 456 | MKLRTLAVSATALKVARLEFPFVDVRM CSEFLSSGVKLQTFVSVTALNALRLLEF VPPGGLMVSLASGVKLQIFTVSVTAHKS SVDPKTLGWSMGLGAVEQGAALGEAW AAQEPMEGVGGSGMAGCRSRLPRGKA AKARREIERSAGH* |
| 2460 | 10511 | A | 3380 | 1 | 282 | PLKRSDCGNDGRPTRPPTPTPTVFTSNL KQTRMVHLATPEEKSAVTALWGKVNVD EIVGGKALGRLLVVLPLQPPGPKLSFG GICPNLSNAG |
| 2461 | 10512 | A | 3381 | 24 | 452 | APSPDAMG/HS LGWKVNVEDAGGETLG RLLVYVPWTQRFFDSFGNLSASAIMGN PKVKAHGKVL TSLGDAIKHLDLKGTF AQLSELHCDKLHVDPENFKLLGNVLYTV LAHFGEKEFTPEVQASWQKMTGVASA LSSRYH |
| 2462 | 10513 | A | 3382 | 3 | 549 | FCPRGOEFEGGNKLLVPDAMGHFTEED KATNTSLWGKVNVEDAGGETLGRLL VYVPWTQRFFDSFGNLSASAIMGN KVKAHKKVLTFLGRCCQSTLDDLKGH LLPKPEVNCTVDKPAWWDPENFKAFGE MLLVTRFGQSHFRQKNSPPGCKASWA ERWVTGVASALVPSRYH |
| 2463 | 10514 | A | 3383 | 347 | 716 | REPCVSRSTCCPLPWMEPRAMCPPVGA MRGSRDPASSLSPDHLAQLQPGAGFL FCSAPALSGSFPFRSPQGHATAGSWL/ CPVQAQPAQALCGPRRGVAWVGIAW EDSGKSVGEVAS |
| 2464 | 10515 | A | 3384 | 1 | 1362 | |
| 2465 | 10516 | A | 3385 | 284 | 540 | KLFOKKNKSSCISDNFFFLAIMVNLQ IVRDHWVHVLVPMGFVIGCYLDRKSD ERLTAFRNKSM LKFSFPHRELQPSSEVT WK |
| 2466 | 10517 | A | 3386 | 194 | 353 | |
| 2467 | 10518 | A | 3387 | 57 | 880 | DPHSVSTGGPLPIWFVPLSSSGPAAVA DPA PQSGPTVDAGVPIPHIRARDSARLP LCPWHASALELGIATPGVTITQAPGSYP AWRSRCLL YPQSPVLLASLGVGLVTLG LAVGSYLVRSSRRPQVILLDPSEKYLRL LLDKTVSWGRKGQGGGDSQAPGM*GT APT VVGMSKGRGSARRAW*NTCVLHPP TVSHNTKRFRLP TAAHHTLGLFVGKES VEWAFPGYPQKVTPLLGSHETRCKNRF APHTISPSPTWLCLQAVRCHWA |

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| 2468 | 10519 | A | 3388 | 430 | 483 | NQPCLTLPTRKSECTDTVISWSLSFGFLF TRWVTGMAVLLRLSLRQAEYTHSQLLL PLDT*RLGNVVKFRGPGSGLLSYTKG GHF NIQPNKKSPPPEVRVAKKLGMIAAGTGITP MLQLIRAILKVPEDPTQCFLLFATQTEKD JILREDLEELQARYPNRFLWFTLDHPPK GILPISGHPTPSSSKSKPCPFVNSGFIEINL ASHCQLGSLSAQTO |
| 2469 | 10520 | A | 3389 | 3 | 1007 | HACAHASAHASGRLLVRWGRKRSSVMGI QTSVPLLASLGVGLVTLGLAAGSYLVR RSRRPQVTLDDPNEKYLLRLNKTIVYSH NTKRFRFALPTAHHTLGLPGVKHLYLST RIDGRVRIKPYTPVTSDEDDQGYVDLVIK VYLKGVQPKPSEGKMSQYVLDLKV DVVEFRGPGSGLLTYTGKGHFNQPNKK SPPEVRVAKKLGMIAAGTGITPMLQLIR AILKVPEDPTQCFLLFANQTEKDIIFAGG LKRNLQARYPNRFLWFTLDHPPKDW YSKGFVTADMIREHLAPGDDVLVLLCG PPMVVQLACHPNLGGTGVTSQKMAISP Y |
| 2470 | 10521 | A | 339 | 1 | 1519 | MAPELSSKEQPGSEWKACQMEGTVC KAQRDLDGFDQNAADDDMDNEIQAE VSDGDEELVGNWSKEPTLGAATMGLG TEKQLGMGWAGRKGPJEDLEPLQAAC KLHAVAHTTWEAEVQCGSLPRRNSNLL LEQGVLEETRNLQEHGGEIDLEKRWL GTVAHTCNASTLGGRGVKLQFTVTSITA PKAARLELFVPPGGLVLLASGVKLQIF AVSVTAHKSVDPKTLGWSMGLGAVEQ EVVLVGEAPAAQEPMEVWGGSGMGAA GFGALPRGKAAKARREIHSAGLYKLLP HSEYSRPNRVPFNSQGSNPVRVSFVNLN DQSGNGDRLCFNVGREL YFYIYKGVK TIP*GCRTEILISVLTEAADLSKPIDKRIY KGTQPTCHDFNHLTATAESVLLVGFSA GQVQLIDPIKKTSLFNEEAFEGRYATF FTI/WYECSHGKLHISSALGLVFFGGDISY SLSSQAPLEGASRDSDGSRGHELVSESSR KRNNKRH |
| 2471 | 10522 | A | 3390 | 2568 | 2781 | RSPGRPHDPPNAPV/RRPASCHS/AAESQ HGGWKKSISASRKLQKLTLLQIAKQE/ LEREAERRGEKGRAL |
| 2472 | 10523 | A | 3391 | 2 | 409 | |
| 2473 | 10524 | A | 3392 | 3 | 490 | SSPEETVGPWDPEGHGPGGLTDPPNAPV LALPAPIGLSLIMADGSSDAVRAAG*GV AGTPRARAREPRPAPAPIRRRSSNYRAY ATEPHAKKSKISASRKLQKLTLLQIAK QELEREAERRGEKGRALSTRQCPLELA GLGFAELQDLRCQLHARVDK |
| 2474 | 10525 | A | 3393 | 2023 | 2613 | |
| 2475 | 10526 | A | 3394 | 150 | 848 | VSAWRNGSSDAAREPRPAPAPIRRRSSN YRAYATEPHAKKSKISASRKLQKLTLL LQIAKQELEREAERRRGEGARSLAPRC VQPLELAGLGFADLPGLCCRFHARV/D KVDEERYDIEAKVSKNITEIANLTQKIF DLRSKFKRPTLRRVRISADAMMQAILG ARAKESLDLRAHLKQVKKEDPEKENRE VGDWRKNIDALSGMEGRMKWKWRELSL AYCPCPEEGH |
| 2476 | 10527 | A | 3395 | 1 | 2880 | |

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| 2477 | 10528 | B | 3396 | 61 | 5070 | MGPTSGPSLLLLLTHLPLALGSPMYSIIT PNILRESEETMVLEAHDAGQDVVPVTVT VHDFPKKLVLSEKTVLTPATNHMGN VITTPANKREFKSEKGRNKFVTVQATFG TQVVEKVVLVSLQSGYLFQTDKTIYTPG STVLRYKFTVNHKLLPVGRVVMVNIENPE GIPVKQDLSQQQLGVLPWSWDIPELVN MQQWKIRAYYENSPPQVFSTEEFEVKEY VLPSFEVIVEPTEKFYIYNEKGLEVTI |
| 2478 | 10529 | A | 3397 | 3 | 560 | EGKGQGTLSVVVTHYHAKAKDQLTCNKF DLCPLGSRQKVEVFLGPCLOPGITFLWSR NRRVLGFPSPMNGEDMGLFLCSEWERSS EGWLCNREGGSGHSIEPHCCTFLHLTHR SLAFSLLAGVSTCASSCKCEKCKCTSC KKSECGAISRNGLWLKVGREPKAVPEV RASGEPAFLCPCRLSLPV |
| 2479 | 10530 | A | 3398 | 3 | 1584 | SNQPLRREAFPETPKGLRGQIGPEGEND RSHFSSFDVTAVMILYKESQALTONLP POLPRRLRAAGRGHPSPAPSRGALS RFPASGRSAVPTIGWLCSHYPHSIRGAN GWDRELVRASHTMSATAQTNHRAEK AGRELSQANNDRTGRLAHPAPPSPQARQ VPRLEHLASPRCPWPAVISRPFSSWHCIL EIRFRK.KLGGRASPENEGAGEIRVKVP KDRDWLTAKLQDGLLTVSQTAKLEDMV LQTAQSTQDFLPTARSYPTTKLKGV NTKSPITLLPTARGHYLLGAPIASWRC HTSTIRYHTVVMSMTLSEHQAGSVD MSANDYAHYSGASGDNEMCVIACPTP LFLSPRAWKPCDAGSKVKNWGIENGNL VHTVLSSTQHGDEPHVHAPGMEAEYA HPLETLITGTFFIGVLLCDHIVILLWAW VTIRLLETIDVHSGYDIPNLNLPFYG SRHHDFFHMMNFQWYGFQHFTRWDW NFLGTDQYNAYNEKRKKFEKTE |
| 2480 | 10531 | A | 3399 | 2 | 873 | GRV/GEMSGQRGKYDFYIGLGLAMSSSIF IGGSFILKKGLLRARKGSMRAOQGGH AYLKEWLWRAGLLSMGAGEVANFAAY AVAPATLVTPLGALSVLVRAILSSYFLNE RLNLHGKIGCLLSILGSUVMVIHAPKEEEI ETLNEMSHKLGDPGFVVFATLVVIVALIL IPVVGPRHQTNILVYITICSVIGAFVSVC VKGLGIAIKELFAGKPVLAGIPWAWILLLS LIVCVSTQINYLNR/PWDIFNTSIVPIYY VFFTSVTLTCSAILFKGVGKDMFVGKCP LVL |
| 2481 | 10532 | A | 34 | 2583 | 3580 | DRVSLLLPRLECNAILAHCNLCLSGSSD SPASASQVGTIGKCHHTQLIFVFLVEMG FHIIAQAGLELLTS/DSPTLASQAGITGV NHHAWLFFCSD/RTVSLCPYGSRV* SRITATSA/PGLK*FACFSLPSSRDYRHP PHPGNCFIGRDEVSPPWGW*TPDLR/ YPPASASQSAEIIIGVSHHTWPQEVFLFN LFIYLRWSL/DSVAQARVQRRLGSLQA PPPRFKPFSCLSPSSWDYRPPPHANFF VFLVETGFTVLARRVLIS*PRDLPASASQ SAGITGVSHHTR/LIF/NFFETGTHSVTWA AVQWYTI/GSLQPRTPELK*SSHLILTSN WDYRCTPPCPNLFYLFYFHRDEGLC CPGWS*TPELK |
| 2482 | 10533 | A | 340 | 759 | 1034 | |
| 2483 | 10534 | A | 3400 | 90 | 458 | HFSRGYLEAFSEISNIRFVPPHSVTVVVV FGACFLCILGIWFWACLPGGEGSGGFG GEGRGSEAGRLGSVELTPATPLQAPEA YPVFEVPPVPEAAQGDTEDEGAAPLKC RICPNAPDF |

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| 2484 | 10535 | A | 3401 | 3 | 787 | PGSTISWRPGLARSLSPDGRRRRRLGLP GFSPASMAGRTVRAETRSRAKDDIKKV MATIEKVRWRWEKRWVVAATPFRJLNW VA/VVD/QEEEERRRAGGAERSRGRER RGRGASPDGGG/PLFILLDNDENSNRQ FPLRKQSLQRGTWPSGGTPK/PNRFCVY LPDPFEGGFCTRAQPPT/RLGQDEERSPGI TV/GSTDEPPMLTKEEPVELLEAEAPEA YVPVFPPVPVPEAAQGDTEDFGSAPP/LK RICPNAFDP |
| 2485 | 10536 | A | 3402 | 1 | 172 | |
| 2486 | 10537 | B | 3403 | 1 | 5501 | MVSKLSQLQTELLAALLESGLSKEALIQ ALGEPGPYLLAGEGPLDKGESCGGRGE LAELP/NGLGETRGEDETDGDEDFTPPI LKELENLSPEEAAHQKAVVETLLQEDPW RVAKMVKSYLQQHNPQREVVDITGLN QSHLSQHLNKGTPMKTQKRAALYTWYV RKQREVAAQFTHAGQGGGIEEPTGDEL TKKGRNRKFWGPASQQLFQAYERQK NPSKEEREAGQLGNSLVTEVRVYNWFA NRRKEEA/RHKLAMDTYSGPPGPGGP ALPAHISPLPPALSPSKVHGVRVYQGP ATSETAEVPSSGGPLVTSTPLHQVSPT GLEPSHSLSTEAKLVSAAGGLPPVSTL TALHSLEQTSPLGNQQPQNLIMASLFGV MTIGPGEASLGPFTTNTGASTLVIGLAS TQAQSVPVINSMGSSLTTLQPVQFSQPLH PSYQQPLMPVQSHVTQNPFMATMAQL QSPHALYSHKPEVAQYTHTGLLPQTMIL TDTTNLSALASLTPTKQVFTSDTEASSES GLHTP/ASQATTLHVPSQDPAGIQLQPA HRLSASPTVSSSSLVLQSSDSSNGQSHL LPSNHSVIETFISTQMAMSSQ* |
| 2487 | 10538 | A | 3404 | 158 | 755 | RGGRPAWPCGSRAMVSKLSQLQTELLA ALLESGLSKEALIQALGEPGPYLLAGEGP LDKGESCGGGRGELAELP/NGLGETRGE DETDGDEDFTPPIKLELENLSPEEAAHQ KAVVETLLQEDPW RVAKMVKSYLQQH NIPQREVVDITGLNQSHLSQH/HQQGHS HEDAEAGRPHVLRPQAARGGA/VHFC RAGRAD |
| 2488 | 10539 | B | 3405 | 133 | 2369 | MVSKLSQLQTELLAALLESGLSKEALIQ ALGEPGPYLLAGEGPLDKGESCGGGRGE LAELP/NGLGETRGEDETDGDEDFTPPI LKELENLSPEEAAHQKAVVETLLQEDPW RVAKMVKSYLQQHNPQREVVDITGLN QSHLSQHLNKGTPMKTQKRAALYTWYV RKQREVAAQFTHAGQGGGIEEPTGDEL TKKGRNRKFWGPASQQLFQAYERQK NPSKEERETLVEECNRAECIQRGVSPQA QQLGNSLVTEVRVYNWFANRRKEEA/R HKLAMDTKVHGVRVYQGPATSETAEVPS SSGGPLVTSTPLHQVSPTGLEPSHSLLS TEAKLVSAAGGLPPVSTLTALHSLEQTS PGLNQPPQNLIMASLPGVMTIGPEPAS LGFTTNTGASTLVIVPTLQDLSQYISDT WVNQTDQNLNSRSREAGTKHNTSILWY LRRPGLHAGTECAGHQHQGGQPDHLQP VQFSQPLHPSYQQPLMPVQSHVTQSPF MATMAQLQSPHX* |

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| 2489 | 10540 | A | 3406 | 1 | 2112 | <p> MMLKGKAHCSILDFGLDLCQSTNSAAE FIRSWEDPWVRVAKMVKSYLQHHNPQR EVDVDTGLNQSHLSQHLNKGTPMKSQK RAALVTTWYVRKQREVAQPHIPIPIENS TGTEWLIETLWLDPTHAKNDQEHRTDSP VNYGKKKGKENKNLKPPEVYVSLIKA CGGPGNFCPSFSELQRNFVKHRPTKLK5 LLRLVKHWHYQQWLOPHREWEKEEVLDA VRTVEEFRLQEHFQGGKRGDQDVRVLK VVKVGSFGNGTVLRSREVELVAFPLSCF HSFQEAACHHKDVLRLIWKTMWQSQD LLDLGLEDLRMEQRVPDALVFTIQTGRGT AEPITVITVPAYRALGPSLNSQPPEVY VSLIKACGGPGNFCPSFSELQRNFVKHRP TKLKSLLRLVKHWHYQQYVVKARSFRANL PPLYALELITTYAWEMGTEDENFMILDE GFTTVMOLLLEYEYICITYWKYYTLHNA IIEDCVRQLKKEERPIILDPAITLNVAEQ YRWDIVAQRASQCLKQDCCYDNRENPI5 SWNVKRARDIHLTVEQRGYPDFNLIVN PYEPIRKVKEKIRRTRGYSGLQRLSFQVP GSEQRLLSSR\CSLAKYGFHSHTHYLLET IPSEIQVFNKPDGGASYAYAINPNSPIL GLKQQIED\HQGLPKKQQQLEFQQQVVL QGLVGWVGIFYGQD\SDTLNLSKKKGE ALFPAS </p> |
| 2490 | 10541 | A | 3407 | 108 | 442 | <p> ALLSWEMSAACWEWPWGLPGGFAKRVL VTGGAGFUR*WRR*PSSGSEPTFTSRSS ACPSASHMIVSLVEDYPNYMINLKDLD YCASLKNLETISNKNQYKFIQGDICD5 </p> |
| 2491 | 10542 | A | 3408 | 115 | 1196 | <p> ALLSWEMSAACWEWPWGLPGGFAKRV LVTGGAGFUSASHMIVSLVEDYPNYMII NLDKLDYCASLKNLETISNKNQYKFIQ DICDSHFVKJLIFETEKIDIVLHFAAQTHV DLSFRTCPWSFTHVNVYMGTHVLVSAA HEARVEKFIYVSTDEYVGGSLDKFED5 SPKQPTNPYASSKAAAEFCVQSYWEQY KFPVIVITRSSNVYPGHQYPEKVPKFSLL QHNKRCCHGSGLOTRNFLYATDVVEAF LTVLKKGKPGIEYINIGTNFEMSVOQAK ELJLIKETNSESEMENWVDYVNDRPTN DMRYPMKSEKIHGLRWPRKVPWKEGIK KTIEWYRENFHNWKNVEKALEFPFV </p> |
| 2492 | 10543 | A | 3409 | 359 | 532 | <p> IVMCHCLELVIGEPCEICGSVCVCVYA AVCVLCVCVHTCFCGACV/CVCVCRRV/ CPVCLCTYL\YLLWGLCVVCYQRVNFWK </p> |
| 2493 | 10544 | A | 341 | 587 | 1097 | <p> QKIINKVVPITGRQCCFVRLSPLESKFQS KEEIRNTSHRANVTKRNSANKR2DAILA TPGPPPAQPHGA/PGGYAPRLPQHPAGC FPKCGNAPRPWYGFPSGLLRKEQKRN PRKGTG*MQGVSPVPFPPT*NAGPLPGGS LGPPISGHIFLVSHTWPPPPRSPTAPP </p> |
| 2494 | 10545 | A | 3410 | 27 | 1389 | <p> GQPRSQQAGSWGKRQESYRAREGDG GSGSLTGLLRTAAGWLLPARASPRERAT RHPVRSQRRARRSLQRGPERPRRDPPQ TAWAARMCTKMEQPFYHDDSYATATGY GRAPGGLSLHDYKLLKPSLAVNLADPYR SLKAPGAROPGPIEGGGGGSYFSCQGSD TGP5LKLASSELRVIVPN5KTAU1TTPT PPGQYFYPRGGSGGGAGGAWGGVTE EQEGFADGFEVKALDDLHKMNHVTPPNV SLGATGGPPHGP/GIR5ASPEPPPVYTN LSSYSPASASSGGAGAAVGTGSSYPTTI SYLPHAPPFAGGHPAQLGLGRGASTFKE EPQTVPEARSRDATPPVSPINMERPRAPS KLEPSQLNRRLAGHQ5AGKRKLRFRAR LEDKVKVTLK\ENAGPVEVPGLPPGSR LAQAQTRKVIDPRV5NGLSLLFGVIRGH AFLNVPCPL </p> |

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| 2495 | 10546 | A | 3411 | 1 | 3589 | IRRLDQRGGHLRKKPLEDLVCKLADISI NYYNERKSEQHILRFLSTLLDSFSSSRVFK MLGDFEKQSIQVQAKPLEIAKLVQKNPAV QFLYQKLGWLNEDQQRKDFGFLVDILYS ALRCCDNDMERKKVLDDLTKVDLKWN SLLKIEKACPSDDKHALVTPWLKGDILG EKLVLNADCLCNEDLESRSSESHFSER WTLSSLVLSQHVKNDYLGIDVYVERIIV RLHETLTKTKKLEAEESDSSVSFICDV |
| 2496 | 10547 | A | 3412 | 112 | 828 | PVFKTPLPSHRRHAAALDILGASSSDP HADSGTGNWAEVDPGSAQHLPRPSSQLP HFLSSGGGPGQCRRGQRGELLPSGGTA TPCAPRGLGWGLRSCALRAAAAPPTAPQ TLRRAPRPARPRAGPLAPQPSISRDFL GQAACASGTMLRWLRDFVLPTAACQDA EQPTRYETLFAQALDRNGDGVVDIGELQE GLRNLGIPLQDAEEVGRRRGA*A*GG LRLGLTRGPRRAAA |
| 2497 | 10548 | A | 3413 | 1 | 1413 | RDARRYSGTTTPHPSISRDLLGQAVCASG TMLRWLRDFVLPTAACQDAEQPTRYET LFQALDRNGDGVVDIGELQEGKLNGLIP LGQDAEEKIFTGDVNKDGKLDFFEFMK HLKDHEKKMKLAFKSLDKNNDKIEAS EIVQPLQTLGLTISEQQAEILQSIDVDGT MTVDWNEWRDYFLFNPVTDIEIIRFWK HSTGIDIGDSLTPDETFDEKKSGQWWR QLLAGGIAGAVSRSTAPLDRLKIMMQV HGSKSDKMNIFGGFRQMVKEGIRSLW RNGNTNVIKIAPETAVKFWAYEQVMKT RLAVGKTQGYSGIYDCAKKILKHEGLGA FYKGYPNLLGIIPYAGIDLAVYELLKSY WLDNFAKDSVNPVGWVLLGCGALSSTC GQLASYPLALVRTRMQAQMLEGSPOL NMVGLFRRIISKEGIPGLYRGITPNFMKG LPVAGISYVVYENMKQTLGVTOK |
| 2498 | 10549 | A | 3414 | 1 | 222 | |
| 2499 | 10550 | A | 3415 | 2 | 528 | SRVDPRVRHSARLTMCHSR/SCHPTMTIL QAPTAPSTIPGPRRGSGPEIFTDPLPEP AADPAGRPASRGRHKRSRRVLYPRVV RRQLPVEEPPNAKRLFLLLALTVFCQIL MAEEGVPAPLPPEDAPNAASLAPTPVS PVLEPFNLTSEPLDYASWNLSTFLQHP AAF |
| 2500 | 10551 | A | 3416 | 1623 | 2346 | TFPSGAKPPLAASHHHRHLDASRLWRG RSGGPSVTRRPFTFLPSYPPAPAHAPASAP GPSVSDSCSPFSRRSRPTRTDFCVCRPVC PPFFIVPPGRAPSRMAEVLILLLLSLPSA AAKIQGYPCPGPOLSRDLSSDGDWWA GLSGHHRVCGGPGVQEPQITVVHNATD GIKYIHRHLIHLTPADYDDFVNAIRSARS AFCLTPMGMMQFNLDLQNLKRSKQTK LWQVRSLEMATTFSP |
| 2501 | 10552 | A | 3417 | 256 | 657 | KGLSLSKAGENHYFYLPHISPEKAPPQ AIGHLSPRGTIEAALDLFSARIVAEFVL ASHHPRHLRDLASRLWRGSGGPSVTRRP TFLPSVPAPAHAPASAPGPSVSDSCSPFF SRRRSPTRLARMRGLLGF |
| 2502 | 10553 | A | 3418 | 294 | 573 | SHLLGLHEPSRHNRASPGSLFCTHRRGIH SASSKPSPTSPCKSPRPSGGAAPRRG*L E*AGLGFSTGFRGFPNRRRRRLGVAI AHQAP |
| 2503 | 10554 | A | 3419 | 1 | 931 | |

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| 2504 | 10555 | A | 342 | 462 | 1238 | SFYETKKLLISGETLDSKDOYRINKYNH YFQTLHYTHLKFSSGLSSATQ*KLWSWK GNG*GERPVSPPLMAPSGQLLAHFWVS EVKSVSCLSCQOQHVLTPSGSSFPQCO PAOCYLIPCSSEKYTNOW/PPIPSLGIQ SS/SPGS*SGPISSSKYSGDAQVCFSSPNL FPSFRPVYTCIQSPPNISPGAEGCGLQPI PVHSFLTPSTFSPVPI*RSRSTHPETHS MSHSQSSQOAPSAIPPSISLSP |
| 2505 | 10556 | A | 3420 | 640 | 757 | |
| 2506 | 10557 | A | 3421 | 865 | 1314 | TPLPSTTPPKQPNRPGPSGAESLETEEEE EEEKGSERPPGRRSRSLRPIRWRRGD PQQOQETGPPKLRPWDGAEAGVAIGH AAAFPH/ITEGPRVLPLGGGVRLTPSP/TL LRTGAGLLHYERLWLNLVGP/CLHPAQ DHTLGLGSWG |
| 2507 | 10558 | A | 3422 | 2 | 310 | ARDVHPLPLPFSLGNSSALAGMQMRPOL LLSRRCRLPATCASSCKCKECKTCTAR KKSCSCLNPGCLVVKCAPRACICKRGHR RSASLLRLMTGTALLPTYK |
| 2508 | 10559 | A | 3423 | 41 | 317 | LLLKFFFTGSHSFIQGVQVQDHDHSLD LPGSGDPSS/AS/RVAGT AGMHDTWLIF VFLVRRWSLTVLLRLVFNWAKVILHL GLPKGWGLQV |
| 2509 | 10560 | A | 3429 | 781 | 949 | LLCLGLAYRRHFEMSLWLGMAVHCNCP SAWGGRGGOITR/GQEFETSLVNMVKT CLY |
| 2510 | 10561 | A | 343 | 2 | 384 | |
| 2511 | 10562 | A | 3430 | 3 | 1029 | RAFRDDDTMAGGCGRAGPGATCSGDGA GSDQRQNEIEAMAAIYGEWCVUIDCA KIFCIRISDDIDDPTWTLCLHVMLENPY CTAPPYQLNAPWLKGOERADLSNSLEEI YIQNIAESILYLWVEKIRDVLQKSMTE PGPDVKKKTEEDVECEDDLIACQFESS LKALDFIEVSEARTEVEEPLPPDHGIPIT DRRSTFOAHLAPVVCPKQVKMGLSKLY ENKKIASATHNIIYARIVCEDKQTFQD CEDDGETVAGGRLLHMEILSVKDVDMG VRARWYVGMGLGPDPRFKHNNCVRNIL VEKNYTSSEESSKALGKNKKVRKDKK RNEH |
| 2512 | 10563 | C | 3431 | 153 | 224 | MVAHACNPSTLGDGRGRFTRSGD* |
| 2513 | 10564 | C | 3432 | 20 | 58 | MTQLTKRKETIL* |
| 2514 | 10565 | A | 3433 | 837 | 1125 | LDVTTSKNQFVRLTWLKPNGCYRRHFF FFETESCSVAQAGVQVHNLSSLAQAPP SRHSPTSASIAAGTYRPAHAWPNFV FVFLVETGFHPC |
| 2515 | 10566 | A | 3438 | 56 | 290 | |
| 2516 | 10567 | A | 3439 | 468 | 993 | VLLACFWPGSDFWPRSRRTYGTAPQSC YSFYVALDCGGVSRVIFVSWRNQVAP TSAHQNRPSPNPVSRPPNTOQVARRKH ALADGYTERRWTNAPCRAESSFPNCP AAPIDSYDK*PSRATLFTSHLTVEAFPV WSYLYPGETPRLHPRAHTRTPAAIRYP DRQTPNGLRGANTMHSQMDTLNGDGR THLAGQARSPRTARPOQYRIHTTSD PGLVRKYASGGCLRIWYCCAWIERALS QVGGGVFGDPLSEGAECDHST |
| 2517 | 10568 | A | 344 | 2 | 624 | SDSRASCCKMLLLLSVALLALSSAQNI DVSQEEPSLIAQNPQGPSQGGNKPQGP PPPGKPGQPPPGQGNKPGQPPPGKPGQ PPPGQDKSRSPRSPPGKPGQPPPGQGG* LQ GPPPRGGIKPGQPPPGKPGQPPPAQGG SK SQSARAPPGKPGQPPQEGNPPQPPPP AGGNPQPPQAPPAGQPPQPPPPQGG RPPQ |
| 2518 | 10569 | A | 3440 | 1 | 3114 | |

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| 2519 | 10570 | A | 3441 | 3 | 401 | TSSLSLSGKSGRYVFLRRSVGIQSPSAVA TVRILLAGSDRRFAAGSAGCAVLSRAER S*EPGCCYRIRRSFAFLRAGSINRDKPV AWPDTGSGDNTVEYFRAHQAGILPDTVL AGPAQRVAVSGGTPVDW |
| 2520 | 10571 | A | 3442 | 2874 | 3062 | |
| 2521 | 10572 | A | 3443 | 2766 | 3323 | MPDLVEGREKSDKGAQPQRTQSRSA NGSGVRILHSLWRIGIPLLLGYSLVCSR VLLACFWPGSDFWPRSRRTYGTAPQSCY SFYVALDCGGVSRVIFVSWRNQVAPT SAHQNRPSRNPVSRPNTQVARRKHYA LADGYTERRWTDAPCRAESSFPNCL* RQYRIHIVDASVCGP |
| 2522 | 10573 | A | 3444 | 968 | 1440 | |
| 2523 | 10574 | A | 3445 | 3 | 640 | LSVVESRIHMGVGVGVGCPVRYRNQDD HELQITHGNKILCGHVCCKGAQPQRTQS RSARTNGSGVRILHSLWRIGIPLLLGYSL VCSRVLACFWPGSDFWPRSRRTYGT VPOSCYSFYVALDCGGVSRVIFVSWRN PQVAPTSAHQNRPRNPVSRPNTQVARRK HYAPADGYTERRWTAPCRAESSFP PNCPSAAPIPSYDK |
| 2524 | 10575 | A | 3446 | 1 | 3140 | MVYKMRYSRQHPYSIKEQMKSEVLVS KEKIGYGMGDAASHIFDNVMLYMMFF YTDIFGIPAGVGTMFVLARALDAISDFC MGLLADRTSRWGWKFRPVVLFALPFG IVCVLAYSTPDLMSNGMKMYAITYLLT LLYTVVNIPYCALGGVITNDPTQISLQS WRFVLATAGGMLSTVLMPLVNLIGGD NKPLGFGQDLSPMFSTPEIARPGPYEND VHVVGASSLAAGHKTLPELVRSAEQHM GTR |
| 2525 | 10576 | A | 3447 | 750 | 1340 | ILHAPAPPFASASHEQPEWSDKGAQP RTQSRSAARTNGSGVRILHSLWRIGIPL LLGYSLVCSRVLACFWPGSDFWPRSRRT YGTAPQSCYSFYVALDCGGVSRVIFVS WRNPQVAPTSAHQNRPSRNPVSRPNTQ RVARRKHYALADGYTERRWNTAPCRAE SSFPNCPFAAPIPSYDK*PFRVS |
| 2526 | 10577 | A | 3448 | 93 | 699 | RASVQOKKLSTDDKGAQPQRTQSRSA RTNGSGVRILHSLWRIGIPLLLGYSLVCS RVLLACFWPGSDFWPRSRRTYGTAPQ CYSFYVALDCGGVSRVIFVGETPRV APTSAHQNRPSRKPGRTPNTQVARR KHYALADGYTERRWNTAPCRAESSFP PELPVQVNTGFIQVITFRDCFVNTIQA ASGFV |
| 2527 | 10578 | A | 3449 | 1000 | 1530 | QRYSDNPPNDKGAQPQRTQSRSA RTNGSGVRILHSLWRIGIPLLLGYSLVCS RVLLACFWPGSDFWPRSRRTYGTAPQ CYSFYVALDCGGVSRVIFVSWRNQVAPT SAHQNRPSRNPVSRPNTQVARRKHYA LADGYTERRWNTAPCRAVEFPNCPWE AQYRIIRK |
| 2528 | 10579 | A | 345 | 85 | 194 | |
| 2529 | 10580 | A | 3450 | 106 | 375 | |
| 2530 | 10581 | A | 3451 | 232 | 376 | KKGVLSVRRHSMET*NEKPAKLMKSGI KIPSPVHHFVFHKQSEKGA |
| 2531 | 10582 | A | 3452 | 481 | 781 | IKDKKVSNOQSLCGYLVAMTIDVEITYA DFIASGRTGRRNAIHDLVSSASGNSNL ALKLAGLDINKTEGEEDAQRSSTEQSG EAQGEAAKSESLTPHF |
| 2532 | 10583 | A | 3453 | 15 | 369 | RVGEYDGYEAGPAFCFPRASLCQ/PGPD QGPPSCTQAIAPARKPHCPWPGPKKL GELPGLCLQGSPTAGHPFCPQETGAQG GAPASFWFSQNNAAAGLICFCPPQRIFL CINSNS |

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| 2533 | 10584 | A | 3454 | 201 | 711 | KKMARKTQARKSTGGKAPRQTAG/LA TKAARKSAPSTGGVKKPHRYRPGTVAL REIRRYQKSTELLARKLPQRLLVREIAA QFSKTALRFQSAIRICACRRLAKRYLVG LFEDNNLCIAHAKRVTHAPKTQ/LARR DTGEKRALSEGFFYGVLLVKFLKYPGLI C |
| 2534 | 10585 | A | 3455 | 758 | 1188 | GKLSGRGTGSLLRGDALPRLOKTGCPKA GGNRPPAVSQSRGGAVRDEGLLAAQTA EGGPRVEEARPPQLPQARQLPETPPPA PDAVPPPTSGSHSPSSAEGSPRPPVGA VDSGGAPQPDGPAPAPALLRHRHQTP RP |
| 2535 | 10586 | A | 3456 | 2 | 297 | |
| 2536 | 10587 | A | 3457 | 1 | 1128 | |
| 2537 | 10588 | B | 3458 | 58 | 1282 | MRTLKNTVIVLLPYKSGKLYGESSTE LNVEVLNCTASQFKCASGDKCIGVTNRC DGVFDCSDNSDEAGCPTRPPGMCHSDEF QCOEDGICIPNFWECDHDPCLYGSDEH NACVPKTPCSPSYFHCNDNGNCIHRALWC DRDNDCGDMSDEKDCPTQPRCPSPWQW QCLGHNICVNLVVCDGIFDCPNQGMSP HFALVAAVDWLSQDSKWLDGSHIVPD VKLCVVASAYRQSYQSLGNDISLYGRQ PKFSRIDPTGKAVQADIRLSARATLWL GGSIIESPVLCTSLRLLRLPPLTWTSP NRPTQPTAQQTQNSQVGLAAPSIRVIY PESVVLNAVLYLPGDPEVSGLPRAFRRF SVEVRLDCGTFKLLVYCTHPGDIKVT CKTGALVAFRCFLPX* |
| 2538 | 10589 | A | 3459 | 1 | 1870 | MKGVPMRSEKPAHEVRASTISTPDLSSI ESFFSRGPSTNHTSIKGRPLTAEKKNKT NRAEEKIKKEELAISGVDEDDGGKGKD TGDVLVEMVLAERCDRHNDGDSYDER GCLYQTCQQNQFTCQNGRCISKTFCDE DNDGCGDSDLMHLCHTPEPTCPPHEFK CDNGRCIEMMKLCNHLDCLDNDSEKG CGEIFRASSPGAILILIVASTHIAITDPR LGNALPVRRIVOPQYSWTPLTLKLWASR VSNQQLLSAAKTHHTVQFSLMALPKG HLFSARLTGKCAQVIVEGFFAGRDKFV CVLNVAFVFPQVFLSLVRTGTASKSTVQ FYRNNISVITGFLIGFLCQSSALDLTFTV VSHFFYGINECHDPSISGCDHNCITDITS FYCSCRPGYKLMSDKRCTVDIDECTEMP FVCSQKCEVIGSYICKCAPGYLREPDG KTCRQNSNIEPYLIFSNNRYLYRLNIDGY FYSILIEGLDNVVALDFDRVEKRYLWID TQRQVIERMFLNKTNETIHNIRLPAAES LAVDWVSSALKGGFVHPLNGGSQHFTL LVD*VIKWL YLISNSVFC*KRWRQLPVF WFGGKREMSWEMMGH*LVEGLCGCH |
| 2539 | 10590 | A | 346 | 617 | 711 | |
| 2540 | 10591 | B | 3460 | 1 | 2973 | MEKQSIQQLPYPDQLPTQCSPLTGLNE YPLSGVSPIDESWDRKSKHSAAMTLRQV HQRHQNNLFLDHNTNVEEYSAQMRIGT HCCCTSSSLLLLVASQNKIADSVTSQV HNIYSLVENGSIYAVDFDSISGRIFWSD ATQGKTWSAFQNGTDRRVVFDSSILITET IAIDWVGRNLYWTDYALETIEVSKIDGS HRTVLISKNLNTPRGLALDPRMKLLYFM DSYLDYMDFCDYNGHHRQVIASDLGF EV |

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| 2541 | 10592 | A | 3461 | 257 | 3561 | RHKKPFKKSMNPGAG/MLYWSDDQGTDS GVPAKIASANMDGTSVKTFLTGNLEHLE CVTLDJEBQKLYWAVTGRGVIERGNVD GTDRLMLVHQLSHPWGIAVHDSFLYYTD EQYEVIERVDKATGANKIVLRDNPVNL GLQVYHRRITEP/CPN*PKTIKIGHYIKDK PTCSSE/AK WYLPHPGQM*IA/DKPEAQ GSRRLTDLBGGNNBIDWISCDICYPSQ VFDSLAKIEGKVDKRTCCPSFPKYGGPI |
| 2542 | 10593 | A | 3462 | 1 | 10725 | MAGAPPASLPCCSLISDCCASNQRDSVG VGPSEPGVGYSLVVRRLSRSEKRNIRV GVTRFSPRELDPDLRFPEHLFFTDWRLGAI IRVRKADGGEMTVIRSGIAYILHLKSYDV NIQTGSNACNQPTHPNGDCSHFCFPVP PQRVCGCPYGMRLASNHLTCEGDPTNEP PTEQCGLFSFPCKNGRCVPNYLYCDGVD DCHDNSDEQLCGTLNNTCSSAFTCGHG ECIPAHWRCDKRNDVDGSDHNCNP T |
| 2543 | 10594 | A | 3463 | 3 | 14105 | SWRRCRPKGAFASRGAAGAVCYARPPP GEGTARPGTIAEMDRGPAAVACTLLAL VACLAPASGQECDSAHFRCSGHCIPAD WRCDGTKDCSDDADEIGCAVVTCCQGY FKCQSEGQCIPSSWVCDQDQDCDDGSDE RQDCSQSTCSSHQITCSNGQCIPEYRCD HVRDCPDGADENDCQYPTCEQLTCDNG ACYNTSQCDWKVDCRDSSEINTEIC LHNEFSCGNGECIPRAYVCDHNDCCQD GSDEHA |
| 2544 | 10595 | A | 3469 | 2 | 230 | WQDFYCC*HIFGAFFTHPDGPSNWAFS NFVMFCHCLPKCWDYRGESRFAHFKIF VDQCTVVKKKKIRKIKNFKL |
| 2545 | 10596 | A | 347 | 2 | 343 | SSVRAVEFPEDASGSSPSGTSKSDANR ASSGGGGGLMEEMNKLLAKRKAAS QSDKPAEKKEDESQMEDPSTSPSGTRA AVTSHLTPQRLAGSPSGATRWRLCPRF CPG |
| 2546 | 10597 | A | 3470 | 134 | 929 | RTAARGCNGIPGAAAWAALPRRRPRR HPSVNPKRSAAGSFRTGRTERPSGSR LGDRGRGRALPGRLGGRGRAPERY GGRGRGRGTAAAPRAAPAROSRPGPAG TMAAGSITLPALEDGSGAIFPGHFK DPKRLYCKNGOFFLRIHPDGRVQGVREK SDPHIKLQLQAEERGVSIGVVCNSRY LAMKEDORLLASKCVTDECFFERLESN NYNTYRSRKYTSWYVALKRTGYKLG KTGPGQKAILFLPMSG |
| 2547 | 10598 | A | 3471 | 1 | 2604 | YLIYQSRFFLFSSIRYQCPMPMPMG/YCNP YAYGQYNMYPYPVYHQSPGQAPYPGTQ QPSYPP/QPPQSYYPQ |
| 2548 | 10599 | A | 3472 | 478 | 697 | |
| 2549 | 10600 | A | 3473 | 21 | 194 | |
| 2550 | 10601 | A | 3474 | 2 | 767 | APLSPGAQLGRGAPTSAPPPAAEAHPA ARRGLRSPOLPSGAMSQNGAPGMQES LQGSWVVELHFSNNGNGGSPASVSIYNG DMEKILLDAQHESGRSSSKSHCDSP/S SOITQDTRNAFETDTHSIGREKQLTVLR EDDIERRKEVESILRKNSDWWDWSSA GKIFPPKEFLFKTPGSRATLSMRNTSVL KKGGSFAEFLKVLFPFAALSIAPGL GIYIGKASDPQSTSTFGWKEPGLDLVR |

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| 2551 | 10602 | A | 3475 | 1 | 4220 | MLNIVQDSALLEAIGCOMEMGGENNIL KSHSRNTNSGISSASGGSTPTTPPSERPA QALLRDYALNTDASAAGLLRSIHLVTQRL NSOWRODMSISLALELLSGLAKVKVM VDSGDRKRAISSVCTYIVYQCSRAPLHS RDLHSMIVAAPQCLCVWLTEHPDMLDE KDCLKEVLEIVELGISGSKSKNNEQEVK YKGDKEPNPASM RVKDAEAETLTCLVN ETTLIKYSRLPTINKHSFRYFVLDNSVILA ML |
| 2552 | 10603 | A | 3476 | 3 | 1676 | HASDSFRYFVLDNSVILAMLEQPLGNEQ NDFFPSVTYVLRGMSGRLAWAQQCLL PRGAKANQKLFVPEPRFPKNDVGFKYYS VKHIRPTEEVDKJPFVKADLSIPDLHEIVT EELEERHRKULRSGMAQQAIEIHL EQQS EEELQKRSPDPVTDCKPFPAAEQFTAR LFLSHFGFLSLEALKEPANSRLPPHLIALD STIPGFFDDIGYLDLLPCRPFDTVFIFYMK PGQKTNQEIKNVESSRTVQPHFLEFLLS LGWSVDVGRHPGWTHGVSTWSINCCD DGEQSQQEEVISSEDI GASIFNGQKKVLY YADALTEIAFVVPSPVESLTDSESNISD QDSDSNM DLM PGILKQPSLTLELFPNHT DNLNSSQRISPSSRM RKL PQGRVPVPLGP ETRIVSVVWVERYDDIENFPLSELMTEIS TGVEITANSSTSLRSTTLEKEVLFVIFHPL NTGLFRKIQQATGKFNMVPLVDGMIVS RRALGFLVRQTVINICRRKRLSDSYSP HVRKQKITD JVNKYRNKQLEPEFYTSL FOEVGLKNCSS |
| 2553 | 10604 | A | 3477 | 288 | 589 | WCSRRRGWYLLLGHHNYWRSTFLVRC TPSCPGGCCPRYGIYPVRS CPRLPGGVSR YGSIHSG/RWCWSWSPSWPLTSTVTPRL YVALM*AVVCPVVGKQP |
| 2554 | 10605 | A | 3478 | 1250 | 1909 | GAGPDMVWDTELELALKISKGLRPIKA HREEREDIGKHESRCVYFGTAKKWLK DKNGRSRVDVISHRLKVSSGLCKTHEIG FDPLALCKPLRSRTAPWWPLDRVSFDLH HLVIGNFFVGNRKIFLDYLVYGF AHNRR WKLLVQSWSDGCVHRTFGLVKSFSKAS FCIFITKQKSSEDLALKQICANTARVIL KLKHHFVFSYMCITFLTCENGHL |
| 2555 | 10606 | A | 3479 | 3 | 246 | AAAMSAISLLJLGLTAVPPASCQQ/GEP AHMILTVGNKADGVLVGT DGRYSSMAA SFRSSEHENAYENVPEEKGVRSTPM |

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| 2556 | 10607 | A | 348 | 2 | 2355 | WCDLGSLOPPPPRFKQFSCSLPRHS*TS Q*PQPPKLTQNFVTADFASNGEIRMS KVGGNPLQPTSLHYMSPYQLSAYAMAL KAVGEIHQDYSDKLFPAFYGFGAKLPPE GRISHQFPLNNNDEDPNCAGIEGVLESYF QSLRTVQLYGPITYFAPVINQVANSWS VTLGTDSEPAVEVPQYVYVIRLLVEGFTIK KPMAMCHRRMRVRAVPLLTQRSGSEG KDSGTPTHSLHTKAQLPSHVL RHQGOV LRRQHSKLVTGKALSTTGKALRTLPTAK VFISLPPNLDK VAPSILKPKRSIREDRNG RSQKTVHTEGDMNMNIKKIVQATVLT FTTALLAGGATQAFAKENNQKAYKET GVSHITRHDMLQIPKQQQNEKYVQVQFD QSTIKNIESAKGLDVWDSWPLQNAADGT AFYNGYHVVFALAGSPKDAADDTSIYMF YQKVGDNIDS WKNAGRVFKDSDKFDA NDPILKDDQTEWWSGATFTSDGKIRLPY DYSKGHYGKQSLTTAQVNVSKSDDTLKI NGVEDHKITFDGDKTYQNVQQFIDEGN YTSGDNIHLRDPHYVEDKGHKYLVFEA NTGTENGYYQGEESLFNKAYYGGGTNFF RKESQKLQSAKKRDAELANGALGHIEL NNDYTLKKVMKPLITNTYVTEIERANV FKMNGK WYLF TDSRGSKMTIDGINSNDI YMLGYVNSNLGTGPYKPLNKTGLVLQMG LDPNDVTFTYSHFAVPQAKGNVVTISY MTNRGFFEDKKAIFAPSLMNIKNKTS VVKNSILEPGQLAVN |
| 2557 | 10608 | A | 3480 | 162 | 530 | ELLQPMASLALLILGLLTAVPPASCOQGL GNLQPMWQGLIAAAFLVLVAIAFAVN HFWGAKEEP/ESPAHMLTGVGNKADGV LVGTGGRYSSMAASFRSSEHAYEN VPEEGKVRSTPM |
| 2558 | 10609 | A | 3481 | 4 | 409 | NAATSLTANPDATTVNIEDPGETPKHQ GSPRGSGREEDDELLGNDSDKT/EGTV SGNDSSVNDTWPLPWGKQANRPLLS LLAGQKSSPFWTEFYQTFDFVDTYQV FDRIGKSLLPFGKNFVRLYIRSI |
| 2559 | 10610 | A | 3482 | 160 | 518 | |
| 2560 | 10611 | A | 3483 | 12 | 197 | |
| 2561 | 10612 | A | 3484 | 2 | 321 | ARGVYGSFLFIYIPTAILWIIPKAVRWI LVQIALGISGSLAMTFWPAVREDNRRV ALATIVITVLLHMLLSVGLACFFDAPE MDHLPTTTGTPTNQTVAAAKSS |
| 2562 | 10613 | A | 3485 | 187 | 1280 | PLARLNCLCSSLSPSFLSNLSFLIGTSL GCTCSLKHSKPKQIFLIGRLTGRMA AYDDLQFEEFNGAATSLTANPDATTVNI EDPGETPKHQGPSRGSGREEDDELLGN DDSDKTIELAGQKSSPFWTEFYQTF DYDTYQVDFRIKGSLLPIPKNFVRLYIR SNPDLYGPFWICATVFAAISGNLSNFI HLGEKTYHYVPEFRKVSIAATHIYAW LVPLALWGLMWNRNSKVMNIVSYSFLEI VCVYGSFLFIYIPTAILWIIPKAVRWI MIALGISGSLAMTFWPAVREDNRRVAL ALIVITVLLHMLLSVGLAYFFDAPEMD HILPTTTATPTNQTVAAAKSS |
| 2563 | 10614 | A | 3486 | 112 | 563 | LDSSHCCSCSTALFRQTITAAAVPRMVI RVYIASSSGSTAI/RGKRQDVLGFLLEAN KIGFGRKDIAANGENRKMRENVPENS RPGTGYPPLPQIFNESQYRGDYDAFFG RPEENNAVYCLLRGLTAPPGVSKGRQE GAKPKAGQALTL |
| 2564 | 10615 | A | 3487 | 105 | 335 | GRLPFKVLSYHSVGYLPLILFCHFLLANC ILCCLMHFL*FFQSYRF*G*KFGFTQHC HYIFHKQWPLLWKNFPEH |

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| 2565 | 10616 | A | 3488 | 993 | 1338 | QNCLKPHFFFFFETRVSLLLPKREAMGTI STHCNCLPGFQGNSSPASASQGRU/AGLH GMGPPCR/RTGFVFLIGDRGLHVGSWS WNSQPQVIRP/PRPSKPCWGLQGM/EAIV PSP |
| 2566 | 10617 | A | 3489 | 2 | 454 | PLLPALPGCHALAPSSYIPVAIRALEPPS PYHGQLKMQSIGPQP/PPRSFFLSSPLD/DV SPQAPRHCTGLPAPSLSSPPWSCPTLFSW PFEASGVCHHWTSVIAASNSSPIFPELPH HPLRISAWLFP/WRDHSQDPLCRGATSP VLNS |
| 2567 | 10618 | A | 349 | 1129 | 1821 | AWGSGKQRRQEAQCEVAEFTPAWRR APDTPAPLVLEPARA*HTSPKKHPFMWC RFFFRQSFALVPIQGVQWRNLGSLQPLP PRFKA/FSYPQPPSSWHYRHRVPIFVFA NFCIFNKRWGFTMLAKLVLNS*PHEIHP PGPSQSAGIMGVSHCTWLVSFVKVVLV DYFFEKTPN*GNRFEFYFLFETGSHSVN QAGVQR/PYHASLQPPQQAQVLSPSW DYRHVPF |
| 2568 | 10619 | A | 3490 | 1109 | 1448 | PRLSKCFLLLLFFRQSHFVAQAGVQWC DLRSVYHLPGLKRFSCSLPSSWDYRHL LPCCP/ANFCNFSRDRVSPCCPGWFRTPD/ PGDPP/ASASPKWWEYTL*PPGDHPKAF |
| 2569 | 10620 | A | 3491 | 14 | 250 | VLSVGLPTGDTGIGLSRKTSPAPVALIHS HSLKQAHPLTLOSRTGNHAIYYRGVLK YCNFICLQFMLRYQLVSFSF |
| 2570 | 10621 | A | 3492 | 1 | 1065 | |
| 2571 | 10622 | A | 3493 | 90 | 1937 | AGGNQRTQSPRKNFMAFOASHRPAWKG SRKKNWQYEGPTQKLFKRNNSVAPDG PSDPSISASSEQSGAQPPGLQVERIVDK RKNKKGKTEYLVRWKGYDSEDTWEP EQHLVNCVEYIHDNRRHTEKQKESTLT RTNRTSPNNARKQISRSTNSFKTSPKA LVIGKDIESKNSQLFAASQKFRKNTAPS LSSRKNMDLAKSGIKILVPKSPVKSRNAV DGFQSESPKLDVPEQGQEDTVAPEVAA EKPVGALLGPGAERARMGSRPRIHLVP QVPGPVTAAMATGLAVNGKGTSPFMDA LTANGTTNIQTSVTGVTASKRKFIDDR DQPFDKRLRFSVRQTESAYRYRDIVVRK QDGFTHILLSTKSSENNSLNPEVLREVQS ALSTAAANDSKVVLPRAVGSVFCCGLN FNYFKPR/LPNARKRESIKMAEAIKRVN TFIQFKPIIIVAVNGP/AGL/GASILPLCDV VWANEKAWFQTPYTTFG/QSEGCSPV MFPKIMGGSCILD/AVLGDRLNTAQ/EAC GKGLVSRVFWPGTSPRKVMVRKELASC NPVVEESKALVRCNMKMELEQANERE CEVLKKIWGSAQGDGTRMLKVLRCRGI E |
| 2572 | 10623 | A | 3494 | 2 | 572 | WCLQHD/LGHASIFKKSWSWNHVAQKFV MGQ/LKGSAHWNNFRIHQHAKPNIF HKDPDVTAPVFLGESSVEYGKKRR YLPYNQQLHYFFLIGPPLLTLVNEVENL AYMLVCMQWAVSGVAQDPGHITAAYA GGGASGDSTCP*RTGTCTDLLWAASFY ARFFLSYLPFYGVPGVLLFVAVRYGRE WR |
| 2573 | 10624 | A | 3495 | 25 | 430 | YKNNSPFPIALGKCAMLTPLPLSHQA QSQGHRAAEYTCGRSPFPVGSPLWQO AAMRAGGWVGR/TAECFSGMSRPGO*R VSGRAGGQPRPSGMSLGGPVPAPSS PLLPAGRCNPRITRTWNLPTRSWA |

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| 2574 | 10625 | A | 3496 | 821 | 1412 | GSARASQPGGKPLVRVDHTDEHPQGD RPREAPGLGQLSAGSHLQRGALTFHQL VQRAPQLPDRAPPLQDAETQLQPGCPA CQVAVCQARPLRSEALPHRAGGHR QVPEESLVTSCWTPTSISEGNTQAGREGL RAPATKPSPRDRIPPTPLTSLGVPCLP WYCCPLPLGLTCVSSPMALALGLMGQ G |
| 2575 | 10626 | A | 3497 | 32 | 616 | VLQCSHGCFSPQSSGGULTDEAASSCCSD ADPSTKDFLLQQTMLRVKDPKKSDFY TRVLGMTLIQKCDPFIMKFSLYFLAYE DKNDIPKFKDEKUAWAVSRKATLELTQ QFGALKDDATQSYHNGNSDPRGFGHIGI AVP'DVYSACKIRFEELGVKFKKDDG KMKGLAFTQDDPGYWIEILNPNKMATL M |
| 2576 | 10627 | A | 3498 | 77 | 403 | |
| 2577 | 10628 | A | 3499 | 18 | 753 | TQPQLTSTCYRAFASWRTRSLLEPATILP TTCCPAPAAAMCRTLAAPTTCLERAKEF KTLIGIFPHKSLELGFDTGSTGKFEWGSK HSKGDLKTSQKDLV.GWRESFDLLSSK NGVAAFFHAFKTEFSEENLEFWLACEE FKKIRSATKLASRAHQIFEEFICSEAPKE VNDIHETRELTRMNLQTATATCFDAAQG KTRTLMEKD/SPYPRFLKSPAYRDLAAQ ASAASATLSSCSLDEPSHT |
| 2578 | 10629 | A | 35 | 45 | 819 | RLSALSPRLCNGAISAHCKRLPLGSRHS PASASRAAGTTGAHHRARLFFVFLVET GFHRVSDGLE/LPDL/DDPPASASQAGI TGVTAAAPSRACSFKLARGACRPGWDWA EELTGTSHTRRVHPGQALWGWDRRCS CGSRSWQT*LRQCPAVLRGWLACLTQ EEQIGPYVSVSPVPVGAACCFDVLK*KI SDKDVFKAAGRAQPKTFSLRKLSPV TQARVQWCDLSSLQLLPPRFK*FSCFSLP SRITT |
| 2579 | 10630 | A | 350 | 325 | 608 | LMPCNPRHFERLRQADHLRSGVPRPALV QHGETLSVLKIQKLGGHGSTCL'SQLRR LRQKNLISLGGRGCSKLRSHCTPAVV TEPDSVSKKK |
| 2580 | 10631 | A | 3500 | 28 | 342 | PGSTHASADA WVPKNI/SSVNAISPGPH CAQTEV/IVSPA RCLCHRRGPRSPCCPN PVPSLTCLTRFSLCRATLKNGRKACLN PASPIVKKIIEKMLNSDKSN |
| 2581 | 10632 | A | 3501 | 1 | 274 | MARATLSAAPSNNRLLRVALLLLLVA SRAAGASVVELRCQCLQTLQGIHLKN IQSVNATLKNKGKACLNPA SPMVQKIE KILNPN |
| 2582 | 10633 | A | 3502 | 1 | 893 | MSREVTTPGKDVARSRLGSGSDPRRT ALGSRSSASSQAVISVSLRAAGSRSRDS CQKENIPQLAGVTQDSQTRTSLVAPTPL HPRGGAIAFLPNSSGIWSSGNFPGLRA FQPQCCKGVKRSRATTEPGQAAPCQLS SSHRSNRLLSPMARATLSAAPSNNRLLR VALLLLLVAASRAAGAFATELRQC LQTLQGIHLKNQSVKVKSPGPHCAQTE VM*VSPAAAAATAGVPDSPAAPNPVLS TSCLTRFSLCRATLKNGQKACLNPA SP MVKIIEKMLKK |
| 2583 | 10634 | A | 3503 | 1 | 407 | ATEPGQAPPRQLFRSSHSRQTRLSPMA RAALSAAPSNNRLLRVALLLLLVAAGR RAAGASVATELRQCCLQTLQGIHPKNQI SVNVKSPGPHCAQNEVHKHTQEMGGKA CLNPA SPIKKIIEKMLNSDKSN |

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| 2584 | 10635 | A | 3507 | 47 | 891 | KQPFVWPAGGERLSGARPKKEARLLR WCPMSFKRNRSDRFYSTCCG/CCHVR TGTLGTWYMYVNNLLMAILLTVETHP NSMPA/VNIQYEVVAGNYYS/SERMADNA C/VFFFAVSVLKYVNPVPMILVYGSNFLY PSGVGWIPFPCYRLDFVLSCLVAISSLT YLPRIKEYLADQLPDPDPKDDLRALDSIS CLLFIVLVFFALHIFKAYLINCWNVCYK YINNRR/VCEIAVYPAFAEPQYVLPITY EMGREKWPEKEPHPLLTWPEGNSGLW TINP |
| 2585 | 10636 | A | 3508 | 246 | 559 | MPVAVMAES/AFSFKLLDQCENQLEA PGGIATPPVYQQLLALYLHN/QRIWQR DFPGIYTTINAHQWSETVQPMIEALRDAT RRRAFALVSQAYTSHIADFFA |
| 2586 | 10637 | A | 3509 | 2 | 250 | |
| 2587 | 10638 | A | 351 | 3 | 218 | |
| 2588 | 10639 | A | 3510 | 2 | 119 | |
| 2589 | 10640 | A | 3511 | 197 | 921 | GTVWGLAVRTVQRRGPAAKMPVAVMA ESAFSFKLLDQCENQLEAPGGIATP KVYGGQLLALYLHNDMNNARYLWKRI PPAIKSANSELGGIWSVGQRIWQRDPFG IYTTINAHQWSETVQPIYKGHFRDATR/ RDRAFAPGLLQAVYFQSIKRMIFAAPVGA LPVEEAVKGILLEQGWQADSTRNGSC PGKPCVRGPWDVFPFNKFSISYSEPAV/ PPIPNEQLARLTDYVAFLEN |
| 2590 | 10641 | A | 3512 | 3 | 354 | |
| 2591 | 10642 | A | 3513 | 1 | 179 | |
| 2592 | 10643 | A | 3514 | 63 | 386 | LRTLISCHLVVLMILFLHTGGDDGLLRG WDTRVPGKFLFTSKR*PPKGQHSVPTPA PAFFGSPALPPFGWVCVLDTGSEASAC RHTMGVCSIQSSPHREHLATGR |
| 2593 | 10644 | A | 3515 | 1 | 147 | |
| 2594 | 10645 | A | 3516 | 450 | 1154 | KSHVLEPLSSALALEEQCLALSJDWSTGK TGRAGDQPLKHISSDSTGQLHLLMVNETR PRLQKVASWQAHQFEAW/TCCFQLPWH PEIVYSGGDDGLLRGWDRTRVPGTFLTS/ IKTHHGCVASIQSKPSSGAHPWPRESYDE THPTVDRNMMKPLADTPVQGGVWRIK WHPFHHLILLACMHSGFKILNCQKAM EERQEATVLTSHITLPSDLVYGADWSWL LFRSLQRAPLVVLIS |
| 2595 | 10646 | A | 3517 | 73 | 168 | |
| 2596 | 10647 | A | 3518 | 322 | 671 | RLWASPAAPGKKKEMGNSMKSTPAPAE RPLPNPEGLSDFLAVLSDYPSPDNPIF RRGEKLRVISDERGWKAI SLSTGRESY IPAICVARSYHGWLLRGPKNMAEELL QLPD |
| 2597 | 10648 | A | 3519 | 624 | 1580 | KAATSENKIJCEWRTSOAALMLHRLW ASPAAPGKKKEMGNSMKSTPAPAEPLP NPEGLSDFLAVLSDYPSPDNPIFRRGE KLRVISDEGGWKAISLSTGRESYIPGI CVARVYHGL/WLFEGLGRDKAEELLQL PDTKVSGFM/RESETKKGFYLSVRHRO VKTYRIFRLPNNWYIYSPRLTFQCLIEDL VNHYSVADGLCCVLTIPCLQTOSTAAP AVRACSSPVYLRQKTVDRWRVSRIQED PEGTENPLGVVESLFSYGLRESIASVLSL TSEDISSFORKKKSISLMYGGSKRKSFFS SPPYFED |

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| 2598 | 10649 | A | 352 | 319 | 1979 | VPGVPAARPERECRAHPASIFPPPGGLDS GFVPSVQDFDKLTEADAYILQILIEQLKL F**QASKRKDEDEQRKKIETLKETTNMVM ESIKHCIVLLQIAKQDSNAEKHADGMIST IKSCRCNIP A*SLGTCDAQCLPRLPYLQ NPLSCVSSQSVHLS*QVGPVLSYLGTSDD SNTQIVPGSGNFTNLAASLTPSQAMSTLS PNTVPEFYSRQ*/EDEFYDAD/ENSIVG SSPKRLIDSSGSASVLTHTSSGNLKRDPDT TESLNSSLNNGTSDADLFDSDHDDRDDDA EAGSVEEHKSVMHLLSQVRLGMDLTK VVLPTFILERRSLLEMYADFFAHPDLFVS ISDQKDPKDRMVQVVKWYLSAFHAGRK GSVAKKPYNPILGEIFQCHWTLNDITEE NKELVSEGPVPGVSKNSVTFVAEQVSH HPPIFSLFMLECFNKKIQFNAHIWTKSKF LGMSIGVHNIGQGCVCCLDYDEHYLTFP NGYGRSILTVPWVELGGECNCSKTGY SANIIFHTKPFYGGKKHRTAEIISPNDKK SPCSIEGEWNG |
| 2599 | 10650 | A | 3520 | 24 | 688 | VDHPPYKRTKTVRAQRSPKSQDIYLGLL VKLYRFSGPEEPNSNIQTRVVLKRLFM RTNRPPLSLSRMIREDEAFAGKKKNP AVVVGPKLIMCGVQGTGPKLVKVCALG GTQAGPHKRNLRARGQRSITFDQLALD/S PLRGCGTVLLSGPSKGVREYVRHFGKAP GNPHSHTKPYVRSKGRKFARAGRRRA SRGYKKLTLDPITLYKKIFADSEKKKK |
| 2600 | 10651 | A | 3522 | 195 | 391 | PGVAGARHPLLAGAPKGRLEVLGAVFHI GSAANQVWVSKSHPFQIPTDQELGGDRA LKGTCLPLS |
| 2601 | 10652 | A | 3523 | 112 | 492 | AHSRTPARPENRAAASAPRKPRRAMSSP PEGKLETKAGHPPAVKAGGMRIVQKHP HTGDTKEEKDKDDQEWESPSPPKTVFI SGVIARGDKDFPPAAQVVAHQKPHASM DKHPSRPTQHIQOPRK |
| 2602 | 10653 | A | 3524 | 3 | 982 | GTRVGVAWRSVRLLGPGAGLRGGVVL KVSPSPCRGGRVPVRAEGARGRGPRN KVPGASSGAAVGAARLTAPLLAKAMAS KLLRAVILGPPGLGKGAAPVCQRIANFG LQHLSSGHFLRENIAISTEVGEMANQV YREKVFVLPDHVITRLMMSLENRRGQ HWLLADGFPTLGAALDKICEVDLVIS LNIPFETLKDGLNRRWIHPSPSGRVYNL DFNPPHVHGIDVDTGEPLVQQEDDKPE AVAAIRLQYKDVAKPVIELYKSIRGVL HQFSGTETNKMWPYVYVYTLFSKNITPIQ SKESILTLAQWEEPWNVDVGHISFQ |
| 2603 | 10654 | A | 3525 | 19 | 445 | |
| 2604 | 10655 | A | 3526 | 1 | 622 | QAAWILKARALTEMVYIDEIDVDQEGIA EMMLDENAIQVPRPTGSLKLPTNQGTG GPSQAVRPTSHSEKPTGFLRPSTQSGRP GTMEQAIRTPRTAYTARPTSSSGRFL GTASMLTSPDGPPIN*SRILNLTYSQKPK MAKALPEYFHHENDVKTALALAALSTE HSQYKDWVWKVQIEKRYRLGMYREA EKQLISAMKQ |

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| 2605 | 10656 | A | 3527 | 1 | 1509 | MKAIEICKSRVTKDWHNHQKLGEGNKTD SPPQPSSEGTNTANTLLJLDFWPLEMIACCW ETFPQRLTAELFMNPTHWHGQYKQNSV GALRALPLQGQPSRRGLPGRVGRRLFTF RPPLSWAGPSLAAPAAAMSSMEPLLLA WSYFRRRKPLQCADLCTQMLEKSPYDQ EPDPFLPVHQAAWILKARALTEMVYIDE IDVDQEGIAEMMLDENAIAPSSSTPITQAG RPTIGFLRPSTQSGRPGTMEQAIRTPRTA YTARPTSSSSGRFVRLGTLMGYREAEKQ FKSALKQQEMVDTHLYLAKVYVSLDQP VTALNLFKQGLDKPGEVTLGLGIARIYE EMNNMSSAAEYKKEVLKQDNTHVEAIA CIGSNHFYSQDPEIARFYRRLQMGYIN GQLFNNLGLCCFYAQQYDMTLTSFERA LSLAENEEEAADVWYNLGHVAVGIGDT NLAHQCFRLALVNNNNHAEAYNNLAVL GDAEG/RHVEQARALLQTASSISPHMYE PHF |
| 2606 | 10657 | A | 353 | 27 | 749 | STCCFQELVTL*GCKLCTFHPGRKWETR LAEPLPQRDPsYRVVMLGELRGIVFLTGI VSPRIENDQEISEDTRSHGVLLGRFQKD ISQGLKFKEAYEREVSLKRPLGNSPGERL NRKMPDFQGVTVERS*PPGEREA/RKYN DFGNSFTVNSNLISHQRLPVGDTRPHKC DECSKSFNRTSDLIHQHRIHTGEKPYECN EICGKAFPSQSSHLIQHRIHTGEKPYECS DWGKTFSCSSDLILH |
| 2607 | 10658 | A | 3531 | 1 | 174 | |
| 2608 | 10659 | A | 3532 | 1 | 189 | MDAVAVYHGKISRETGEKLLATGLDGG SYLLRDSSESVPGVYCLCVLFFQKPDQGV IPLQYVP |
| 2609 | 10660 | A | 3533 | 3 | 210 | CPRVHQAMD VAVYHGKISRETGEKLL LATGLDGSYLLRDSSESVPGVYCLCVL*V *YVCEYDVTVDPLWYLVMAA |
| 2610 | 10661 | A | 3534 | 1 | 386 | GISLAQFSSSACPRVHQAMD VAVYHG KISRETGEKLLATGLDGSYLLRDSSESVP GVYCLCVLYHGYYTYRVVSQETGWS A/EAFQKPDQGVIPLOQYPVEKSSARST QGTGIREDPDVCCLKAP |
| 2611 | 10662 | A | 3535 | 224 | 751 | LVPGCCSSGISLAQFSSSACPRVHQAMD AVAIVYHGKISRETGEKLLATGLDGSY LLRDSSESVPGVYCLCVLYHGYYTYRVVS QTETGWSAETAPGVHKKRYFRKMKS HFQHFQKQDQGVIPLOQYPVEKSSARS TQGTGIREDPVCLNAPLIKISPLRPLFS ITFNIC |
| 2612 | 10663 | A | 3536 | 3 | 199 | SIRAEMSRSVAVLAVLALLSLSGLEAIQRT PKIQVYITSSSREWKVKFPELLCVVVSST PTLKLTY |
| 2613 | 10664 | A | 3537 | 134 | 404 | |
| 2614 | 10665 | A | 3538 | 415 | 533 | |
| 2615 | 10666 | A | 3539 | 1 | 3349 | MDQPEAPCSSTGPRLAVARELLAALAE LSQEQLRFRHKL RDVGPDGRSIPWGRL ERADAVDLAEQLAQFYGPEPALEVAR TLKRADARDVAAQLQERRLQRLGLGSG TLLSVSEYKKKYREHVLQLHARVKERN ARSVKITKRFTKLLIAPESAAPPEALGPA EEPEPGRARRSDTHITNRLFRREDEGRRP LTVVLQGPAGIGKTMAAKKILYDWAAG KLYQGGVDFAFFMPCGELLERPGTRSLA DLILD |
| 2616 | 10667 | A | 354 | 69 | 378 | KGGSLLGAPRVEGPNFGLKDDSSPKKRE FPALPPGGGN/KRAGPPCPGKFGFLKKK GVPPGGKRGGLNRPQGDSSS*PPKGGGI TGGAPRPGKKRSFSLQKIL |
| 2617 | 10668 | A | 3540 | 3 | 261 | |
| 2618 | 10669 | A | 3541 | 3 | 429 | |

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| 2619 | 10670 | A | 3542 | 1 | 859 | ALGKQKCEWRSKY/EALK/ED/WRNLG AQHRLLESQHLVLSQKLGADSRDLQM NQALRSIQNFHQQLQAKIECLQADRDLC SLYTQDLQDQLKRSEAEKLLTVTRVQQL QGLLQNSQLQEQEKLTK/KRSANLL POLRYCSFSLPRGSGMDYMTSWSPSQ FWFEC*VRDVVELFKD*SLALRTLQIVS LLS*DOALPVWS*KSFPNEVEPEGTGKE KDWDLRDQLQKKTQLQQAKEKECRELH SELDNLSDEYLSCLRLQHCREELNQSQ QLPPRRQCGRWLP |
| 2620 | 10671 | A | 3543 | 392 | 2016 | AKNRNACLEVIMISDPDRPSPLARGAESY EAKCERRQEIRESRRCPNVTTCRQVKG TLRIQOREQLQARLQOQFRRRNLELEE KGKAQHPQAREQGPSRRPGQVTGTSEV FPAQHPPSGICRDLSDHLSQAGGLPPQ DTPMKPPKHHRGTQTKAEGPTIKNDAS QQTNYGVAVLDEKIIQLSDYLKEALQRE LVLKQKMLVILQDLSTLIQASDSSWKGQ LNEDKLKGLRSLNQLYTCTOKYSPW GMKKVLLEMEDQKNSYEQAKESLQK VLEEKMAEQQLQSTQRLALAEQKCE EWSQY/EALKEDWRTLGTQHRELESQ HVLQSKLGADSRDLQMNQALRFLNE HQQLQAKIECLQGDRLDCLSDTQDLQD QLKRSEAEKLLTVTRVQQLQGLLQNSQ QLQOEKLLTKKDQALPVWSKSPNEV EPEGTGKEKDWDLRDQLQKKTQLQQA EKECRELHSELNLSDEYLSCLRLQH REELNQSQQLPPRRQCGKGLPLVMVVI APALAVFLANKNNLM |
| 2621 | 10672 | A | 3544 | 35 | 219 | |
| 2622 | 10673 | A | 3545 | 293 | 479 | |
| 2623 | 10674 | A | 3546 | 1 | 968 | VKLPSCPDPMAGTSLLCWMALCLLGAD HADTGVSONPRHNITKRGONVTFRCDP SEHNRLYWYRQTLGQGFEPLYFQNEA QLEKSRLLSDRFSAERPKGSFSTLEIQRTE QGDSAMYLCASSLAGLNQOPHFGDGT LSILEDLNKVFPPEVAVFEPSEAEISHTOK ATLVCLATGVFFPDHVELSWVWNGKEV HSGVSTDPOPLKEQPALNDSRYCLSSRL RVSAITFWQNPNNHFRQVQVQVGLSEN DEWTDQRAKPVTVQVSAEAWGRADCGF TSVSYQQGVLVSATILYEILLKATLYAV LVSAVLVLMAMVKRKDF |
| 2624 | 10675 | A | 3547 | 278 | 1283 | GGIGEIKORPSCLCRLDPSLVLMNLS ELGSVFSAVISQKPSRDICHRGTSLTIOGQ VDSQVTMMFWYRQOPQOSLTLIATANQ GSEATYESGFVIDKFPISRNLTSTLTVS NMSPEDSSIYLCSEVEQGFVGAETQYF GPGTRILLVLEDLKNVFPPEVAVFEPSE AEISHTOKATLVCLAICFYLHVELSWW VNGKEAHSGVSTDPOPLKEQPALNDSRY CLSSRLVSAITFWQNPNNHFRQVQVQVGLSEN DEWTDQRAKPVTVQVSAEAWGR ADCGFTSGKSYQQGVLVSATILYEILLK ATLYAVLVSAVLVLMAMVKRKDSRG |
| 2625 | 10676 | A | 3548 | 151 | 286 | |
| 2626 | 10677 | A | 3549 | 28 | 177 | |
| 2627 | 10678 | A | 355 | 213 | 660 | KPVILGYAEPAPGQFSRGP/WSRAE/WP GTASPLLV/SCATSALL*SIKGPDSHRGH QHGTPTKPSKPEKTAHQLSRYITPQE KEIAPLNPPALKSPSKENRDPRLTGPGQ TSRALTVPAGCALGPQVEPMKALRRQM GGAVFPLGS |
| 2628 | 10679 | A | 3550 | 422 | 671 | RIYPALRMPISINTASIAQARKLVEQLFMF VANIDRIKVSAAAADLMAYCEAHAKEDP VLLTPVPASENPFKEKKFFCAHPLSL |

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| 2629 | 10680 | B | 3551 | 62 | 299 | MFSLLKKWNAVAMWSWDVECDTCAICR VQVMDEGIGVRNWSEALNLIYASEMGF DLDMGQSQTLSPLAHWLLNNLGWMNL X* |
| 2630 | 10681 | A | 3552 | 1 | 602 | ADVEDGEETCALASHSGSSGSKSGGDK MFSLLKKWNAVAMWSWDVECDTCAICR VQVMDEGIGVRNWSEALNLIYASEMGF DCRSSTALAVPSVSLASHQPLCLDDHR* QPIGSIQSSLP*RNQSQS*GRK*KVASVEL LKEGFCVNACLRQQAENKQEDCVVWVW GECNHSFHNCMSLWVKQNNRCLPQQ DWVYQIRIGK |
| 2631 | 10682 | A | 3553 | 2 | 428 | SGGSTPLGLSAPFKPTSSAVSGVGAAM ADVEDGEETCALASHSGSSGSKSGGDK MFSLLKKWNAVAMWSWDVECDTCAICR VQVMDACFRQQAENKQEDFFVVLGECN HSFHNCCHVPCGSKQNNRCLPQQDW VVQIRIGK |
| 2632 | 10683 | A | 3555 | 3 | 378 | |
| 2633 | 10684 | A | 3556 | 2 | 299 | LLNSRPRRRQQAQPSLEMONDAGEFVD LYVPRKCSASNRIGAKDHASIQMNVAE VDKVTGRFNGQFKTYAICGAIRRMGES HDSFLRMAKADGIVSK |
| 2634 | 10685 | A | 3557 | 1 | 392 | RRYLRCVTSCLFSLSRVWVWPARRSPAF EMQNGRRSSDLRYRARGKLSASNRIG AKDHASIQMNVAEVDKVTGRFNGQFK TYAICGAIRRMGESDSDSILRLAKADGIV FKELFDWREITDVGFCHK |
| 2635 | 10686 | A | 3558 | 1 | 415 | FRDIVNENGEIEQDEEDGYDDIEMT GTGMKES*NSPVVMAG/HGGSNPQANR QTSOSSAKMSTPADKVLRFKFNKINLD KLNVTDSVIYKATEKF/DTKGIKYVLDPT TRMILFKMLTRGJITDIDGCSITGREANV |
| 2636 | 10687 | A | 3559 | 139 | 1914 | AVPFHRRAAASGGALQSWTTGGLMSR VVPQGQDDADSSDSSENRLKTVKEKDDI LFEDLQDNVNENGEIEDEE/WKEGYD DDIEMTGTGMKELENSPRVMSGIRGKQP TGKSTD/PDSSSAKMSTPADKVLRFKFN KINLDKLNVTDSVINKVTEKSRQKADM YRIKDKADRATVEQVLDPRTRMILFKM VTRGITTEINGCISTGKEANGYHASTANG ESRAIKIVKTSILVFKDRDKYVSGEFRFR HGYCRGNPRKMVKTWAEKEMRNILRLN HSR/GYHCPEPIMLRRHGLAMSFIGKDD MPATNFGKMFQLESSEKARELYLQVIQY MRMYQDARLVHADLSEFNIMYHGGG VYIIDVQSVEHDDHPHAEFLRKLDCAN VNDFFMRHSVAVMTVRELFEFVTDPIPL HHENLDAVLSKAMEIASQRTKERTV/SS QDHVDEEVFKRSYIPRNLDDEVKNYERD MDIIMKLKEEDMAMNAQQDNILYQITVT GLKKDLSGVQKVPALLENQVEERTCSDS EDIGSSCESDSTDSEEQGDHARPKKHTTD PDIDKKERKKEVKEAQREKRKNKPKH VKKRKEKTAKTKKGK |
| 2637 | 10688 | A | 356 | 629 | 1007 | KGTYIKQERLENLRTNHLDKYNNPPMK QNYQKLCQKGMASRTHREESR*MRGNR CRLRITRNA*FEGENLQNKQAQGENLEKK PEPATYI*EA*ESKRDKGV*KSYCVSSEFT MQ*KSD*SEYSYG |
| 2638 | 10689 | A | 3560 | 129 | 567 | SYKSRLARKSVTGGKAPRKQLAYKKPA SQECGPLLGGLLKPHRYRPGTVLREIR RIVQKSTELMIRKRLRFORLVREIAQDF KTDLRFOERSNQVALQEARRAYLVWP FLKDTNLVCLSPMKRVPIMPKRHSSAR RHHVENVL |
| 2639 | 10690 | A | 3564 | 194 | 338 | |

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| 2640 | 10691 | A | 3565 | 197 | 522 | GSAAMKVKIKCWNGVAHWLVVANDE NCGICRMFAFNGCCPGCECSPMLSERPR LQAGPATDCPAGCGGVLPTCFQHALHP QVGLHAQQVQALAPMLPRIGKFKKE |
| 2641 | 10692 | A | 3566 | 1 | 6521 | MLRKRKWLGVVAHACNPSTLGGGHP DKQPQVRRLLSAPGSRIAGQWVLDLKS PHLLKGENDKNSLSQAFVVAHVLDLDE SERGVLVTMTTETGPDSEVKKAQEEAPQ QPEAAAAVTTPVTPAGHGHPEANSNEK HPSQODTRPAEQSLDMEEKDYSEADGLS ERTITPSKAQKSPQIAKKYKSAICRVTL DASEYECEVEKHGRGQVFLDLVCEHLN LLEKDYFGLTFCDADSDQKNWLDPSKEIK KQIRSE |
| 2642 | 10693 | A | 3567 | 1 | 1232 | GCTGTWGEALFIKEKGFFVSPATGPMA AVQMDPELAKRLFFEGATVVILNMPKG TEFGIDYNSWEVGPGLRGVMPPIGHHFL HYSSVDKANPKEVGPRMGFFLSLHQRG LTVLRWSTLREEVDLSPAPESEVEAMRA NLQELDQFLGPYPYATLKKWISLTFNISE ATVKKLQENRQICAFSDVLPVLSMKHT KDRVGQNLPRCGIECKSYQEGLARLPEM KPRAGTEIRFSELPTQMFPEGATPAEITK HSMDSLXYALETVHNKQFPSPQDVLGEL QFAFVCFLLGNVYEAFAHWRLLNLLC RSEAMKK/HATRLWINLISLHQLGEIP ADFFVDIVSQHNFLTSTLQVFFSSACIA VDATLRKKAEEKFAHLTKKFRWDFAE PEDCAPVVEELPEGIEMG |
| 2643 | 10694 | A | 3568 | 2 | 166 | |
| 2644 | 10695 | A | 3569 | 56 | 1072 | ARGGGAMEGLEENGGVVQVQGLLCKI CGRTFFVPVALKKHGPGCQKATKRRKTF DSSRQRAEGTDIPTVKPLKPRPEPPKPS NWRKRHEEFATIRAAKGLDQALKEG/G KLAPPPPPSYVDGFIQW/CPY/CQRKIP MENAADRHNIFNCEQAARISNKRRTSTD TKGKPTSRTOVYKPPALKKSNSPGTASS GSSRVPOPSGAGKTVVGPVSGQKVSSS SSSLG/NTKLQTLSPSHKGLAAPHAGANV KPRNSTPPSFARNPAPGVLTKNRKTYT ESYIARPDGDCASSLNGGNKIGEHSPG NPKFCHECGTKYPVWEAKFCECGIR RMIL |
| 2645 | 10696 | C | 357 | 1 | 555 | MLYVLIESERARIKKLQEEKTRNLESSRK LEPTIVSEHKGLRTEQTDIDVLQHLTK EHSVSHSQSPIRDSQWFTLSPQEKYACSY ERKDPILKRAFIIFYHRNAVSHGGNGPA VVLPISEFVLTPPIFESTLPLSSRLAWGT SSKDPRIAAGQSPLEKKILYSKLSHHT VVNNTYTES* |
| 2646 | 10697 | A | 3571 | 32 | 469 | |
| 2647 | 10698 | A | 3572 | 659 | 1149 | EVTACRQPSVAFSTSLALALTALLEPF SLLLHCESPLLGWASSCGGCAGSPSAG PAGIVLK/SLAGPQLPCRVLGTCSLPY LSLPPAVGSGFARASLMSAAPCSMARVP STTQGLLSRTPQCGQMAQDQWQAAPPAS PVQDPLEEASWAPESSGDLNFFV |
| 2648 | 10699 | C | 3573 | 361 | 501 | MLFLRYAPLVGGSFCIWSHPLQFFLTSIK VNFVETLFCFQSFKDF* |
| 2649 | 10700 | A | 3574 | 124 | 579 | EPLPGLAKAGAGSLSCSRVPCAAGASPT SATPCSIAPSPIDHPRAECEGRMVQDWQ AAPAPRCGIHVVK/PAGLLSLLMSMVR INMIVKLLVVFILLVT*FTVKVCLYIFQGL CCGLLFCKILHGSPSHHRPKDLWHHCIDL DVRHEVKGHDH |

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| 2650 | 10701 | A | 3575 | 2765 | 3138 | YSLKSGSVMPALFFWLRIALAMQALF WFHMFNFVVSNSLKKVIGSFMGMALN L*ITLGSMAIFTILILPTEHGMFFHLFVSS FISLSSGL*FSLKRSFTLSVSWPRYFILFE AIVNGSSL |
| 2651 | 10702 | A | 3576 | 265 | 663 | GRASGVVRSRPRWCDLAGRGEAADLH GVCYSRLRSPAGFTQW1QHQSRSWSCLP VPRRAPALLAALGWSMGWAPPQPLAWV LSPSLPGAGSADWLLQVRGPPSRPPGTP AGPPAPCAALVPARVSPSTLFS |
| 2652 | 10703 | A | 3577 | 82 | 361 | LRSPAGFTQWIRTGAAAGGAACQFRAVRP ALLSPWVVDGTGRRGAGGGAYRGGSG RTGAHGTGGGSGMAGCRSRAVPRKAA KTRPCEVQKRQHNVNLYFPVETKAQT VKWVFLA*ASPCSVGSCAARASPIAAP CSTAPSPIDHPRAEECWAHGTLAGSSTC SPGADPLGEASWAPE |
| 2653 | 10704 | A | 3578 | 806 | 934 | KILSSKFPFSLPSYVCTSSFF*THPSIIST SSSSHSVPTN |
| 2654 | 10705 | A | 3579 | 1034 | 1393 | AVTLTGKVCSTPEASETTNPPGGINNS RRASLR AATLTVKVRSFTPRGSAASEFKS VRPRTHQFRTQYSPRMSKIRDCSRSCSFI SFLASWRIICLL*VLISLCAW*RYRLFWP LPSS |
| 2655 | 10706 | A | 358 | 4627 | 5052 | LSTKAPRKDTLKNWCWENWISICRRLQ LGSYLLPY*KJNQKWKGLNDRSETMKL LKENIGEMLKNIQGLKDFMVKTSKA*AT KQKIGRWBYIKLKICTAKKT/IRVKRPTV DGNITFKLSNRLISR VYKEINSTVKKK KK |
| 2656 | 10707 | A | 3580 | 529 | 750 | REFRVGVASADPAFOGAAGRPCQQQ*G A*HTQQWLRRVYWVPQQCQPTGVALDP SPGLSCLPAGQGSOPAAARHA |
| 2657 | 10708 | A | 3581 | 2 | 343 | HAVFFISIRSPMFFFKLVILVSNSSKLFSTF LVSLHWVRTCSFSSEEFVITHFLKPTSVN SSNSFSVQFCSLAGEEL*SFSGGEEAFWFL EFS AFLHWFFLIFMDLSTFGLCC |
| 2658 | 10709 | A | 3582 | 289 | 422 | |
| 2659 | 10710 | A | 3583 | 189 | 309 | |
| 2660 | 10711 | A | 3584 | 587 | 801 | |
| 2661 | 10712 | A | 3585 | 76 | 1740 | SLTLAASSFQQLKQSSHLSPHSQWDYR LRMTQNKLLKCSKANVYTEVPDGGWG WAVAVSFFFVEVFTYGIITFGVFFNDL MDSFNESNSRISIISCVFVLTFSAPLAT VLSNRALGHRLLVVMGLGLVSTGMVAA SFSQEVSHMYVAIGHSGLGYCSFLTPTV ILSQYFGTRRSIVTAVA*STGECFAVFAF APAIMALKERIGWRYSLFVGLGLQNLNVI FGALLRPIFIRGPASPKIVIQENRKEAQY MLENEKTRTSIDSIDSGVELTTSKPNVPT HTNLELEPKADMQQQVLVKTSPRSEKK APLDFSLKEKSFICYALFGLFATLGFFA PSLYIILGISLIDQDRAAFLISTMAIAE VFGRIAGGFVLRPIRKIYIELICVILLTV SLFAFTATEFWGLMSCSIFFGFVGTIG GLTFHCLLKMMSSWALQKMSAAGVYIF IQSIAGLAGPPLAGLLVDQSKIYSAFYSS CAAGMALAAVCLALVRPCKMGLCQRH HSGETKVVSHRGKTLQDIPEDFLEMDLA KNEHRVHVQMEPV |

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| 2662 | 10713 | A | 3586 | 1 | 2472 | GFVFLLLAPLSRLEFHKSRGLKNVFEGLEAEFCYKVHLDGGEELWVRPDAETTTHOGRVSOEKHQALGCKWPKLGDALCVILSAPSIDHPKAECCRRRARDWQAAPPAAFPVRDPLGEASWAPESQQOMKEAAELGVSCMGPDLEKLTLYEVKRLQGGCKAAQRPLGCTLLAIQGTLYQRIFSLTQPELVNGKGWHLTQESLSQNSLEFLTSEPHSPNPNEGSSRRQSLHTNANNMAFASEQFFNLPSGSGSRGFFGRARVHLHDCQNCQRLTAGPAQLQGSRAANRRKALVSPSSSVAREDGFAEEMVFTYGIKTFQVFNLDMSFNESNSRISWIIISCVFVLTFSAPLATVLSNRFHGRLVVMLGGLLVSTGMVAASFQSEVSHMYVAIGISAIMALKERIGWRYSLLFVGLLQNLNIVIFQALLRFIPRGPASPVIQENRKEAQYMLENEKTRTSDSIDSGVELTTSPTKNVPTHITNLELFPKADMQQVLVKTSPRPSEKKAPLLDFSILKEKSFICYALFGLFATLGFFAFSLYIIPILGISLGIDQDRAFFLLSTMAIAEVFORIGAGFVLNREPIRKIYIELICVILLTVSLFAFTATEFWGLMSCSIFFGFMVGTIGGLTFHCLLRMMSWALQKMSAAAGVYFIQSIAGLAGPLLAGLLVDQSKIYSRAFYSCAAGMALAAVCLALVRPCKMGLCQHHSGETKVVSHRGKTLQDIPEDFLEMDLAKNEHRVHVQMEPVVRRRFAAAGPAGLGAAGSDAAPPAREGPERRAGYSGFAAACDFSTAAPKREQRGLSLVGLM |
| 2663 | 10714 | A | 3587 | 323 | 1303 | STLYLPAMDITNQEIPDLLALGTSAWSSTLAALEPPFSLPHCGSPPLGWSRPELAPSACREVWREKPEWELGLRTVLAGQCEFRVGVGSGDSTRSSWPPLAPGNEGLSTRASSCGGCTGSPSRAGPPVLCISQCALAAFPGRARGLQPAMPEPPPLRGLLCSPEPRLVPPPAAGHPVPLTTQGLRSTGTKHRDWQAAPPAAPVRDPLGEASWAPESANLVGKWRFTVSSSGTANAPISTLSKQTTLGVQSAGCGWGQNLGAKYRA/LCRPVKSD*HGRQTKDTGVRLSGKGLSNN*LFVGTGSHRPHFPPTYMDGLASGV |
| 2664 | 10715 | A | 3588 | 1 | 3552 | |
| 2665 | 10716 | A | 3589 | 375 | 646 | KKSLLSINSLQUVMKSGKYVLGYKQTLKMIRQGKAKLVILANNCALSGNNIELGTACGKYRVTCLAIIDPGDSDIIR/SMPEQTGEK |
| 2666 | 10717 | A | 359 | 1 | 366 | KKQIFLELISIYSRVAGYKINTQKSAVFLYNSNKQLNL*IK/DTMPFILAC/NK*KHLPLNLTK*VQEIYEGNYDTFMK*IED/DKQRNISSW*KRFIKMPILPNLIYRYNAFPVKISESYLVDI |
| 2667 | 10718 | A | 3590 | 75 | 335 | LRILKFLSCSLSLGWGSPSRLQEDGGRKRRRKKSLESINLRQLQVMKSGKLLPGGTSQTLKMIRQGKAKLVILANNCGPAIRKSEMEYYCYVWLKTCG/HIPLTVGNNE/LGATA/CGKITRYVLHTGLFIDPG*LLTSFRKACPEQTC*KMVAAKEDEKSRWSRSTLGSNSLWKSGLLPGGTSQTLKMIQTRQSEMWSFSLTTGSPFEEI |
| 2668 | 10719 | A | 3591 | 1 | 2580 | |
| 2669 | 10720 | A | 3592 | 1 | 1386 | |

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| 2670 | 10721 | A | 3593 | 2 | 1419 | RPPGIRAPROLHPAAGRFPDASAPRFRFP TVLLHDPQLSFPPPLSYSPVFAVARV LPORSQDYRAAGMPQLSGGGGGGGDP ELCATDEMIPFKDEGDPQREKIFAEIVNP EEEGDLADIKSSLVNEEIPASNGHEVA RQAQTSQEPYHDKAREHPDDGKHPDGG LYNKGPSYSSSYGYIMPMNNNDPYMS NGLSPPPIRTSNKVPVYQPSHAVHPLTP LITYSDEHSPGSHSHIPSDVNSKQGM RHPPAPDIFTYPLSPGQVQITPPLGLWQ GQPVYPTTGGFRQPYPSLSGDTMSRFS HPMIPGPPGPAHTIGIPHPAIVTVPVVKQ DHPHHSDDLHMHVKPQPEQRKEQEPKRP PTKKPLNAFMLYMKEMRANVVAECTL KESAAINQLGRRWHALSRREQAKYYEL ARKERQLHMQLYPGWSARDNYGKKKK RKREKLQESASGTGPRMTAAYI |
| 2671 | 10722 | A | 3594 | 59 | 435 | STCPAPQASRVQWCNLSLQPPPTPTPR SSNSPASASQAGITGVRRHHTQLIFVLV GDGGFHCYGSQVWSNCFSGWRPLWP HLFLGFHKDLEVYGLVFASISFRSWRW DLKNSSVLTHFFK |
| 2672 | 10723 | A | 3595 | 54 | 442 | |
| 2673 | 10724 | A | 3596 | 360 | 1023 | GQGRLPERGYLEAGVYRICGRQSRHED GTHRGAQVIEQRRKWLPAALGFQPIQL CGKRVPAPSRASTGQPQASRAWSGPLP HPQCGSDIRLVRRAEYCEHGALEQGV SRRPQALARQLDVFQATAVLRSRDLGS VVCIDIKFSELSYLDAFWGDYLSGALLQA LRGVFLTEALREAVGREAVLLVSVDEA DYEAGRRLLMLEEGGRRPTEAS |
| 2674 | 10725 | A | 3597 | 3 | 370 | QMYCVFNERNEDACRYGS/IGVLAFLAS AFFLVVDAYFPQISNATDRKYLVIDGDLF SGVLAASLAQRYKAGVDDFIQNYVDPT PDPNTAYASYPGASVDNYQPPFTQNAE TTEGYQPPPVY |
| 2675 | 10726 | A | 3598 | 1 | 1356 | |
| 2676 | 10727 | A | 3599 | 3 | 706 | GGGSGGDDGDMESGAYGAAKAGGSFDL RRFLTQPVVARAVVLVFAIVFSCIYG EGYSNAHESKQMYCVFNERNEDACRYGS ANGVLAFASAFVLVDAYFPQISNATD RKYLVIDGLFSAWTLVWFVGFCLTN QWAVTKPKTVLVGADSVRAAITSEFSI FSWGVLASLGYYQRYKAGVDDFIQNYV DPTPDNTAYASYPGASVDNYQPPFT QNAETTEGYQPPPV |
| 2677 | 10728 | A | 36 | 2 | 424 | |
| 2678 | 10729 | A | 360 | 241 | 583 | NGPPFFFFFEMEFSLLLPRLECNAGISAH RNLRLPGSSDSPASAGGL*SQVAGITRL RHHD*LLY/FLVEMRPHRVG*AGLELLT SGDPPSSASQAGITGMSHSAHYGKIF |
| 2679 | 10730 | A | 3602 | 1 | 171 | RILMAINGKVFVDVTKGRKFYGPVKYHH VGKLLTAGEEPWVYSDEEPEKDESARK ND |
| 2680 | 10731 | A | 3603 | 3 | 253 | LSLQEFGTFSAGRDAISRLATFCLDKEA LKDEYDDLSDLTAAQOETLSDWESQFTF K/LLKEGEPTVYSDEEPEKDESARKND |
| 2681 | 10732 | A | 3604 | 3 | 701 | PARHSLAQREEKVASSGSLPSAAQPLLSE IMAEDVYVATGADPSDLESGCLLHEIFT SPLNLLLLQICFLLYKIVRGDQPAASG DSDDDEPPPLRLKRRDFTFAEALRRFDG VQDPAPYSWAINGKVFVDVTKGRKFLLT GPEGPYGVFAGRKCQGGALPTLLDKEA LKDEYDDLSDLTAAQOETLSDWESQF TFKYHHVGKLLKEGEPTVYSDEEPEK ESARKND |

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| 2682 | 10733 | A | 3605 | 3 | 678 | KRLPKMAEVQVLVDGRAHSSGLRLA AJVAKQVLLGRKVVVVRCEGWNISGNF YRINKLYLGFPPSGMNTNPSRIGPYHF GAPSRILLAGTVRGMALPHKTKAEAKAA LDRKLVFDGIPPPYQGEKSGMVVPAA LKVVRLKPTRPKCLIVGRLAPEVGVWK YQAVTATLEEKREKPRFHYRKKENSI MLRKKQAREETWRKKIDKYTEVLKTHG LLV |
| 2683 | 10734 | A | 3606 | 114 | 353 | |
| 2684 | 10735 | A | 3607 | 104 | 342 | |
| 2685 | 10736 | A | 3608 | 211 | 241 | NFNNGRGLAAGRRKKPDWLDSTLNS*PS H |
| 2686 | 10737 | A | 3609 | 37 | 116 | |
| 2687 | 10738 | A | 361 | 654 | 942 | CHACNPQHFGPRPROVDHLRSGV*DOGP QHGETPSLLKJQKLAGEHGVHIL*S*LLR RI.RQENRLNLGGGCGSEPRSHLCTPAW VTE*DSVSRKKKKK |
| 2688 | 10739 | A | 3610 | 104 | 516 | ALSSRGVMAEYGTILDITNNITLEDLE QLKSAFKEDIDPSEKSEEITGSAWFSFLE SHNKLDDKNLSYEHIFEISRFPDLLTMV VDYTRVLKISEEDELDTKLTRIPSAKKY KDRIPLSEEEHKLAPPPKKA |
| 2689 | 10740 | A | 3611 | 569 | 838 | PTVLWEPPSPPPPQGIPIHSG/PDILTGR RRASPSGLCYSENGGLTEEGSTRPAH/S PGATVSSPPPPPPSSSLPCLGNRHFD RV |
| 2690 | 10741 | A | 3612 | 268 | 356 | |
| 2691 | 10742 | A | 3613 | 489 | 605 | QLQVCYCT*RPYSGTRCGVSNVQLLCS LLSHLCCSAS |
| 2692 | 10743 | A | 3614 | 391 | 561 | |
| 2693 | 10744 | A | 3615 | 367 | 855 | GARRQAHTMALKIRINKELSDLARDPPA QCSAIGPVGDDMFHWKATINGDMLMDK PIFKGGVFFLTHFTDYPFKTPKVAFT TRIVHPNINSNGSICLDILRSQWSPAL.TIS KVLLSICSLLCDPNPND/DPLVPELARVY KTDREKYNRISREWTOQYAM |
| 2694 | 10745 | A | 3616 | 1002 | 1480 | MLLLKTTTERFEVSVCMACTYVSNLGGK QRSVSFLASGLMRVSTGPRLHHSFVL TGDVGRRICRLLVGLFTKGDTSKRVRHP FSPG/CFLCDLARVGSPPKINRVPHT RTQTSQRSCITVFVWQRCSLVGPFQVTV FTMYFHHSLSRSIRFSSG |
| 2695 | 10746 | A | 3617 | 223 | 415 | |
| 2696 | 10747 | A | 3618 | 1 | 858 | |
| 2697 | 10748 | A | 3619 | 144 | 1339 | DPEQPDMEQPWPPPGWWSLPRAEGEAE ESDFVFPSSPRCPOLPGGGAQMYSHGIE LACQKQKEFKVSSVACKWNLAEAQKQL GSLALHNESLDDQEHAKAQTSIRTEGN GKKNWRQKEALRQREKMCWLSTDAI SKDVFNKSFNQDKRKDTEDDKSESEM QKYEQKIRHFGMLSRWDDSQRLSDHP YLVCEETAKYLILWCFHLEAEKKGALM BOIAHQAQVVMQFIMEMAKNCNVDPGRC FRLFFQKAKAEDEGYEAFKNELEAFKS RVRLYSQSQSFPMTVQNHVPHSGVGS GLLESLPQNPDYLYQSYISTALCSLNSVVH KEDDEPKMMGHGCIIVKTAERAKCYFVT GKGGTWAIFLDTFMGLVALYFCSVFDG RERVLCFCVNF |
| 2698 | 10749 | A | 362 | 1 | 2322 | |
| 2699 | 10750 | A | 3623 | 44 | 420 | |
| 2700 | 10751 | A | 3624 | 20 | 421 | |
| 2701 | 10752 | A | 3625 | 1 | 346 | LRPOSAQSSFPSPSPSDVQLATLAQRV KEVLPHVPLGVQIDLAKTGCVDI.TITN LLEGAVAFMPEDITKGTQSLPTASAKF/ PROQSLQERKQALYEFARRRFTERRAQE |

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| | | | | | AY |
| 2702 | 10753 | A | 3626 | 162 | 461 |
| 2703 | 10754 | A | 3627 | 39 | 260 |
| | | | | | DCKPVARPSTKAKTDQSGPFLSLPHRY LSLSLTLRSSSPESMTWCWMEGREKESA SQ*VTTTFRASMSSTYA |
| 2704 | 10755 | A | 3628 | 1 | 2160 |
| | | | | | FRPGAPEAAVMELSSWPGPERLFDSHRL PGDCFLLLVLLLYAPVGFCLLVLRLFLGI HVFLVSCALPDSVLRFRVVRMCAVLGL VARQEDSGLRDHSVRVLISNHVTPFDHN IVNLLTTCSTVSESEADSATVRFPQAQLK APLSPLAFPMEDTEALPLTPILYPTQCOFF FIFLNIPLAPSSPGSQPLLKNSPQAFVC WSRGFMEMNGRGELVLSLKRFCSTR LPPTPLLLFPEKKATNGREGLRFSSWPF SIQDVVQPLTLQVQRPLVS/VGECVLNRE SLGLEGEISHPWPLRPHLMPSPQTVSD ASWVSELLWSLFPVPTVYQLVAKELGQT GTRLTPADKAEHMKRQRHPRLPQSAQ SSFPSPQSPDVQ/IWATLAQRVKEVLP H/VGPLGVQRDLGMKGGGTLGDGHRE EKWVVKEEKTGCDVLTITNLLLEGAVAF MPEDITKGTQSLPTASASKFPSSGPVTPQ PTALTFAKSSWARQESLQERKQALYEYA RRTFPQVTRSHISTALEDPCLSKSTICQ RGNSLRSCQRATMTSQPLRLAEYGPSP GESELAVNPFDDLFPSSRYELLKQRQA LPIWAARFTLEQLESNPTGVVLVSGEPG SGKSTQIPQWCAEFALARGFQKGQVTVT QYPPLAARSLALRVADEMDLTLGHEVG YSIPQEDCTIGPNTLLRFCWDRLLQEVA STRGPGKLGRACTR |
| 2705 | 10756 | A | 363 | 8453 | 9757 |
| | | | | | APCLLGWSLPSRSAKTYAYLFSHPSRMP VYPKWVGADHADDIYVFGKPAFATPG YRPQDRTVSKAMIAYWTFNFAKTG*DVG *VQGGGPQPRASHHEALFPHLPVEGLW ASHLTPCIGIHVCLMRVTRGRAPSPCTC TASAQYAVRGMVPRASSEGGDGSVQV ESRASAPWESPAPAQPLLTLQDPNMGD SAVPTHWEPTYTENSYLEITKJMGSSS MKRSLRTNFLRYWTLTYLALPTVTDQE ATPVPTGDSEATPVPTGDSEATPVPT GDSGAPPVPTGDSGAPPVPTGDSGAPP VPPTGDSGAPPVPTGDSGAPPVPTGDS GAPPVPTGDSGAPPVPTGDSGAPPVPT TGDSGAPPVPTGDSGAPPVPTGDSGAPP VPPTGDSGAPPVPTGDSGAPPVPTDD SKEAQMPAVIRF |
| 2706 | 10757 | C | 3631 | 44 | 340 |
| | | | | | MKCSQPXRCHFQSDFOKCAPCPRAQTH WLEPPGRVQTISSMRNAQKGFADSIRLW RLPASGVGVVVSPEGAGDPSHLLDPGH SAPYSAPRQLSRVP* |
| 2707 | 10758 | C | 3632 | 2037 | 2426 |
| | | | | | MKCSQPPRCHFQSDFOKCAPCPRAQTH WLEPPGRVQTISSMRNAQKGFADSIRLW RLPASGVGVVVSPIQTOQEVAPEGMYLV GSSSGTLGGCRALTQVFLSLSLGCVCA CACACLFSLWAHQDVSS* |
| 2708 | 10759 | A | 3633 | 184 | 9818 |
| | | | | | IEEPRDTRLQVCSGVHIWCLDKFKMRKH RHLPLVAEFLCLSGPETHAQOQADV KNGAAADHFLVDSSWITGEEHFQLVREF LYDVVKS LAVGENDEHFLVQFNGNPH TEFLNNTYRTKQEVLSHISNMSYIGGTNQ TKGLEVIMQSHLTKAAGSRAGDGVPO VVVVLTDGHSKDGALPSEALKSADVNV FAUGVEDADEGALKELASEPLNMHMFNL ENFTSLHDIVGNLVSCHISSVSPERAGDT E |

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| 2709 | 10760 | A | 3637 | 312 | 805 | GPQAGSSPEILLPEDNSLIRWAGAGCHTQ DSATTVTASWAPLACAGAREEDGTPCV CLGRSARPKLVFGRLRTSAAALRFGACIP HGLLCYPREPVDPRPGSGRAWPPRSPSP/ QODPRPSRSPAGSEFGW/CPDPAPPRLV TLGRASPHLTLPRRAAPPCRWRF |
| 2710 | 10761 | B | 3639 | 199 | 286 | XSELESALQMEPAARQALYSAEKKPLED EHLVFFCQMKGRLQAHAAAGPESWIHW QSOLRWSL* |
| 2711 | 10762 | A | 364 | 10 | 548 | FRLVLSRLEGIGAILAH*NLCLGSDNSP ASATRVAGITGTRHHAFLIFVFLVEMGF RHVGGAGHKLLISGDPFA/SASQASAGITG VSH/ARLAALSNF*GLQVPTPLKQATLL SLLDTPSLPAIFFLFFF*DRFSVVTQAEV QWGDHCSLHP*PTGLKDFPASASRLGTT RTRHHSR |
| 2712 | 10763 | A | 3640 | 754 | 1082 | GMVHICCLGAPRTQPPQAQLPNLSAKLL AFPSTLSTPPVSELESALQMDQPAFQAL YSAEKKPLEDEHILVFFCQMKGRLQAT QLARSLGYTGARNYAGAYREWLEKES |
| 2713 | 10764 | A | 3641 | 113 | 737 | AGPDSFCNFSVCPSTSTAWILVLQAFL SPILLPSPRMLTVALLALCASASGNAIQ ARSSSYSGEYSGGGKRFHSHGNQLDGP ITALRVNRVNTYYIVGLQVRYGKVSWSY VGGNRGDLIEIFLHPGESVIQVSGKYKW YLKEAGYLVPTKGPFLSFGKSGGPSFN AVPLHPNTVVRFISGRSGSLIDAIGLHWG CFHTHSCSRC |
| 2714 | 10765 | A | 3642 | 1724 | 1818 | |
| 2715 | 10766 | A | 3643 | 1 | 894 | RGESRVLWSELEGEAGGAGWASSLNA RMDNRFATAFVIACVLSLISTYMEGOSIG TDFWYEVRSPPGQENSSDLNKSIDEFIS DEADDATYNDALPRYNTVGLRRVY SPYPKTLHWVLAHHERTESFDFVTKCV SFILATEQFMEKAVDPGK/HTNSRGLDLL RTYLWRCQFLLPVSLGFDVLWGALIG LCAVICRSLYPSIATGILHLLAGLCTLOS VSCYVAGIELHQKLELDNVSQGEFGWS FCLACVSAPLQFMASALFIWAHTNRK EYTLMKAYRVGMSSKKPACF |
| 2716 | 10767 | A | 3644 | 323 | 898 | |
| 2717 | 10768 | A | 3645 | 816 | 1171 | LFKHFVGPVANWGLPIAANDMKKSPG DYSVGRMTFALCCYSLTFMEILPYKVQ PSGTWASCFACHGTNEVRPSIQGEGRLI PNTRMDLKRASQINQWGKGNKVFEED SLCPGCC |
| 2718 | 10769 | A | 3646 | 205 | 369 | |
| 2719 | 10770 | A | 3647 | 3 | 451 | CSGAGAEPANPRSPRLVPSLESTSTSV PPAPGTMATDSWALAVDEQEAABE/SG AVVKTNANAETDEEEKEDRAAQSLLN KLIRSNLVDNTNQVEVLQDRPNSPLYSG KSFEELRLKPQLLQGVYAMGNQPSKIQ ENALPLMLAEPY |
| 2720 | 10771 | A | 3648 | 1 | 186 | |
| 2721 | 10772 | A | 3649 | 2 | 261 | SSANNISILGAFRSVTKWLS*THPL*FFCQ CLCLSPITYELAQTKGVIEQMGKFYPEL KLAYAVRGNKCEYGRRLNSEQGRGLG V |
| 2722 | 10773 | A | 365 | 252 | 934 | LCASLRLLPAPMMLSLSHRISPHPWGVI YGC*GGRSGSDIGSCRETGLCRGSPGCI KTSTSPWAPAG*APSTGPGSQETCTAHS PFIPAPA*AOGLKF*GVTESICAGAAGTA GGTETAVSAGSPAGQAPQPGAGQSLSA GSQMA*GSDHPGPIWQTC*SVQCAFALD G*GG*LHPHP*GPATLPEGGGVCAPAA KNASGATREVPVLQAVHAPGATWLRP P |
| 2723 | 10774 | A | 3650 | 1 | 2613 | |

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| 2724 | 10775 | A | 3651 | 3 | 550 | LCSSR/DEKFKALCNLP/AITMAQAMIF CHTRKTAISWLAELSKGEGHQAALLSGE MMVEQRAAVIERFREGKEKVLVTNNVC ARGEQRTCPWTASRLGVPGPIRARNPCI QGSRMVSGRWGLVTLFLSRDCLDFP EVVTRHTQQRWLMPIAIPROENCLNPG DRGCEPRMCMYSTPSWVTE |
| 2725 | 10776 | A | 3652 | 1 | 1571 | CRGAGAEPAANPRSPSLVPSLEYTSTV PPAPGTMATDSWALAVIDEQEAAAESLS NLHLKEEKIKPDTNGA/VVKTNANAETK DEEEKEDRAAQSLNKLIRSNLVDNTNQ VEVLQRPNSPLYSVKFEEELWLKPLS QGVYAMGFNRPSKIQENALPLMAEPPQ NLIAQSQSGTGKTSPLVLA/MLSRIVEPI RPDTPQCLCLFPTYEAGGFKQGVIEQM GKFPYELKLAYAVRGNKLERGQKISEQI VIGTPGT/VGLNWCFQLKFIDPKKIKVFV LDEADVMIATQGHQDQSIQIRQMLPRNC QMLLFSATFEDSVWKAQKVVDPNVIK LKREETLDTIKQYVVLCSRDEKFOAL CNLYGATIAQAMIF/CHTRKTAASWLAEE LSKEGHQVVMLSGEMMVEQRAAVIERF REGKEKVLVT/PNLCSRGIDVDQVS VVI NFDLPVDK/GNPDNETY/LHRIGRITARF GK/RGLAWNMDVSKHSMNINRIQ/HEH FNKKIER/LDTDLDIEIEN |
| 2726 | 10777 | A | 3653 | 3 | 421 | |
| 2727 | 10778 | A | 3654 | 209 | 435 | |
| 2728 | 10779 | A | 3655 | 126 | 775 | APAKVRTAQEDRDTFSSQRTWRKEQNTI DNMALLGPKGLFLFAAFTTSDWIPLGV NSQ/RGDDVTOATPETFTEDPNLVNDPA ATDETVLAVLADIAPSTDDIASLSEKNT TAECWDEKFTCTRLYSACSGPVNQMH FIQLCFHPVLRRMYIVQPRENCSVLYC KGTPKPMKDELQ/RQ/MAGPLRLR/RRP QLLPDPFPCENVDIQRPNGL |
| 2729 | 10780 | A | 366 | 169 | 457 | SLEVSLODHFQKCRFLKRRERFWKGMFS FCSMAVSGFLAAGA GLKPRSG/WH*VFH SPRRSWTENFKFORDEVSA/PLGAWRAL TKEKGGAQPLEGL |
| 2730 | 10781 | C | 3660 | 162 | 425 | MVGPSLHAGXXXVYIPRFLYIRSWLPCIF FSGGVTVGNIGRQLAMGVPEKPIVIESK PXILESXGRFLEENLXLVDYXKGLSFFLK * |
| 2731 | 10782 | A | 3661 | 89 | 308 | |
| 2732 | 10783 | A | 3662 | 2 | 454 | |
| 2733 | 10784 | A | 3663 | 570 | 1418 | PMPRIHDHFWSCSAHSARRRGPPRAIA AGLAAKVGEMITVFSQPSLMVLSASD ADPAPRGRSAVKSGPYGSPYPNTWHHS LMQKSLVLFSGEVLALVLNLLQIQRVN TLFPFEEVATIFSSAWWVPPCCGTAPAD VGLLYPCIDSHLGEPIKFKERMGOVSMR CIAVFGVGHASAKLD/ANNVQLSLTLA ALSLGLWWTFRDRSGLGLGNTIAFLAT LITQFLVYNGVYQYTSDFLYIRSWLPC IFFSGSVTVGNIGRQLGYGVLEKPHSID |
| 2734 | 10785 | A | 3664 | 195 | 462 | RIFSMTSGLRLWRCTWRPATALWSASLR LGTSSMHPSRPSISLP/PVHVHTHNSGKE VLGLQVQRSRSGTGACSQAGSGAVQVG GNWCIF |
| 2735 | 10786 | A | 3665 | 12102 | 12327 | |
| 2736 | 10787 | A | 3666 | 535 | 992 | RIFSMTSGLRLWRCTWRPATALWSA/SL RLGTSSMHPSRPSISLP/SMMLSVPLPS NTRGLSPTALVRSPN/SEHATSCPRLHL WRCRAPLRSPLGR/LPGATPGVPSHVH THNSGKEVLGLQVQRSRSGTGACSQ GSGAVQGGNWCIF |
| 2737 | 10788 | A | 3669 | 76 | 419 | |

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| 2738 | 10789 | A | 367 | 186 | 370 | QIRETSGTGT*YTSASQSAHIEVSHHAR QMFOFYSQKYTLNCCCKL*ILMFKIKFPL TQK |
| 2739 | 10790 | A | 3670 | 71 | 350 | AFIPAMAEILQKKLQGEVEKYQQQKDL SKSMSGRQKLEAQLTENNIVKEKRYES QLRDLERQSEQQRETLAQLQGEFQRAQA AKAGAPGKA |
| 2740 | 10791 | A | 3671 | 334 | 1191 | GILPLHGRVQRRLPRLSLACGLTRGP HPFLLPQIHHLTRIVGIGTFDVSKLPL SSPDLKSMMSGKQKLEAQLTEYNIAKEV RDWDLWGEEGPVLAMVLITYVPSLHQE LALLDGSNVVFKLLGPVLVKQELGEARA TVGKRLDYITAEM*VFIPPPCAAPCDASE PLE*RC*TIAEQLSIVAPSPVPPTLSFPF*P PFFSLPWISRFSTYLFAPSTLHSESY*FLP FCLSPLSLLSKRYESQLRDLERQSEQQRE TLAQLQGEFQRAQA AKAGAPGKA |
| 2741 | 10792 | A | 3672 | 210 | 617 | AFIPAMAEILQKKLQGEVEKYQQQKDL LKSMSGRQKLEAQLTENNIVKEELALA DGSNVVFKLLGPVLVKQELGEARA TV GKRLDYITA EIKRYESQLRDLERQSEQQR ETLAQLQGEFQRAQA AKAGAPGKA |
| 2742 | 10793 | A | 3673 | 3 | 266 | |
| 2743 | 10794 | A | 3674 | 31 | 500 | ARVTA AVSAAVAKR VWRDGFDCSGY YSLTILLVQPTKRPIEGRTYADYESVNE CMEGVCKMYEEHLKRRMNPNGPSITH NTTSQOLFDDDLADLSCLVYRAIDTQT YQYPYNKDWIKDEPTVLLSSGKAQQA REIIVVGSHWGGWGGAWDTGV |
| 2744 | 10795 | A | 3678 | 1 | 134 | |
| 2745 | 10796 | A | 3679 | 162 | 437 | RRGLEFAGPGPROEPSRASSPMPSERLRN IKDFLITARRKDAKSWIKKNKDNVVK FKVRCRYLLHPWSSPDKEKAELVKQS LPPRFCK |
| 2746 | 10797 | A | 368 | 150 | 799 | QC*DPETSETV*EKL RAGRHRQCHGGQ SCFDKSATRALPPRKWRHRTGTRCAATK RTRLOEMA VLGP*E* RQPEEPRTTSLA EPTVL SRKCRPSEKRGSA TEKFGATSA VTENPFLGAAGERANKITL/ROCHRDITDF RTPASDGERRRSHTEGPINRSLAMRMGK GSGITENRADWAGPGCKVCESCS/RVL HLCVYGSHHRIWHMEGYQHMLV |
| 2747 | 10798 | A | 3680 | 60 | 216 | |
| 2748 | 10799 | A | 3681 | 505 | 794 | NVVECLFKDALPQLSADRFLASSILLGDL GVVEVHFVSVSNLTGEELWHLLRSTSLGI ASPPHIEVPFLEVDGDRITKTQVFPLTNLH VRAHASAHAS |
| 2749 | 10800 | A | 3682 | 685 | 1484 | LRLTFPEFSHTKVRTMSLFPSPLLLLSM VAASYSETVTCEDAQKTCPAVIACSSPGI NGFPKDGDRDGTKGEKGEQGLRGLO GPPGKLGPNGNPGSPSGPGKQKQGDGP KSPDGDSSQAASERKALQTEMARIKKW LTFSLGQVGNKFFLTNGEIMTFEKVKA LCVKFQASVATPRNAAENGAIQNLIKEE AFLGMPDEKTEGQFVDLTGNRLTYTWNW NEGEPINNAGSDEDCVL LLKNGQWND SPCSTSHLAVCEFI |
| 2750 | 10801 | A | 3683 | 427 | 751 | |
| 2751 | 10802 | A | 3684 | 31 | 558 | EFVPHSEKMLDYDQAQAVAYLAFQLS GDEFYSDVAKGILQYVARSLSHRSOGFY SAEDADSPPERGQRPKEGAYYVVTVKE VQQLLPEPVLGATEPLTSGQLLMKHVCL TEAGNISPSQDPKGETCRARMLLDRPVL RWELTAARFGLDV/EKAVRLLNTGLEK LFQARKHRPKP |

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| 2752 | 10803 | A | 3685 | 3 | 399 | KCVCLLTAFSERMRVPVALPEMVRALS AQOQTLKQIVVWRPSSGQRTPKALVQC VHSVYIPNKVLILADGDPSSLSRQLPFLS TLRRLEDQATAYVCENQACSPITDPCE LRKLLHPLTCPYPLGWGR |
| 2753 | 10804 | A | 3686 | 2 | 2238 | NVAAMLGARAWLVRVLLPRAGAGLA ASRKGSSSRDKDSATVSSVPMPAGGK GSHFSSSTPQRVPNRLIHEKSPYLLQHAYN PVDWYFWGQEAQFDKARKENKPIFLSVG YSTCHWCHMMEEESFQNEIGRLISED VSVKVDREERPDVDKYYMTFVQATSSG GGWPMNVWLTPLNLPQPCVGGTYFPPE GLTRVGFTVLLRIREQWKQNKNTLLEN SQRTVTALLARSEISVGDRLQPSAATVN NRFCQQLDEGYDEEYGGFAEAPKFPPTV ILSFLFSYWLSHRLTQDGSRAQQMALHT LKMMANGGIRDHVQGGPHRYSTDRQW HVPHFEMKLYDQAQLAVAYSQAFQLSG DEFYSDVAKGILQYVARSLSHRSGGFYS AEDADSPPERGQRPKEGAYYVWTVKEV QQLLPEPVLGATEPLTSGQLLMKHGYLT EAGNISPSQACELADKQHSPOQPKGELQ GQNVLTVRYSELTAAARFGLDVEAVRTL LNSGLEKLFQARKHRPKPHLDSKMLAA WNGLMVSGYAVTGAVLGPRQLINYAT NGAKFLKRHMFDVASGRLDADLLHR/H LGGLWSTATPPCWGFLEDYAFVVRGILL DLYEASQESAWLEWALRLQDTRDLFW DSQGGGYFCSEADWGAQLPLRLKDAQ DEAEPSANSVSAHNLLRLHGFTGHKDW MDKCVCLLTAFSERMRVPVALPEMVR ALS AQOQTLKQIVICGDRQAKDTKALGA VRPLCLHS |
| 2754 | 10805 | A | 3687 | 5 | 188 | |
| 2755 | 10806 | A | 3688 | 132 | 341 | GFTSFISRLSCLSFCLLLET/CPVTCWCWE APRCNQKCTDPAARRPDPQTCASQDRLR CAPCTCHQPLASR |
| 2756 | 10807 | C | 3689 | 4 | 204 | MCFORKSYYFHIQTLYCLPICALRYSTG PAPAMWKCHTAPVKDOWLTPITLITLS PNFLTILNI* |
| 2757 | 10808 | A | 369 | 1200 | 1678 | RYKLLSYRKPEATAIEOKENIPFONLSRFS KNLHFWK*SPKETSRLYHECLQLNSSCLI LTLAYPVQIUCHLFLDEPGRMSDORRAQ NVPFMGFHHVGOACLNLS'DRPAASAS QSARIEVSHHARQMFQFYSQKYTLNPN CKL*ILMFKIKFFLTOKQ |
| 2758 | 10809 | C | 3690 | 57 | 209 | MEVXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXGRLLFGL* |
| 2759 | 10810 | A | 3691 | 363 | 424 | |
| 2760 | 10811 | A | 3692 | 2 | 264 | KFSLIKLRKENFPTARICRLVYPLYPLKIF IFPKALNFCREVGPICPPPKKGSEFPKIPKV AFNRPLRLKKIIPSPALNWGPPRPV |
| 2761 | 10812 | A | 3695 | 2 | 201 | GRVGSDDSCORQQGDTKRRRLSSYPWR RRQRWRRRTSSRRKPQLRQRQRPQR ARRRWRATREA |
| 2762 | 10813 | A | 3696 | 31 | 445 | EKAVVTSAASSLVYTVYTAQAPARSFHP FCSTWSAKEPNNTAGEGGSTNEQCCI.SA /CPGANCPGLGTLKSPQNCPSSSLPRPLP ACRGSYESVWARLQSVHAIQORRLRES WSPKLYWVHPPEVYVGAERTFLFLV |
| 2763 | 10814 | A | 3697 | 73 | 404 | AYSRTGSSSLTMNQATAILCCLIFLTLSGI QGVPLSRTVRCCTCISISNQPVNPRSLK EIIPASQFCPRVEIATMKKKKEKRCRLNP ESKAIRNLKAVSKERSKRSP |
| 2764 | 10815 | C | 3699 | 250 | 495 | |
| 2765 | 10816 | B | 37 | 44 | 307 | MVAVSCRQRPTSPRAWGKVGAVHA MCAEALERMFSLFFTTKTYFPHDLSHG FCPLRATGKKVADALTNAAVAVGRHA |

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| | | | | | | QRRCP* |
| 2766 | 10817 | A | 370 | I | 1107 | MTLEATHLLRLVLLVLLASGGSLFQSP VKSILGVAVTVVLLLLALLINRYLQK ARGRARKPYTEDVSDKKTTETWEWAR GEGESYHVYDDVQKEKTTDRMIRSSSM CVHKINTSVSMCAQETPNSSKKAKI.GOK IPVQGDDEILHKALCFCPWLKGGMPL RLILLFVTELSGAHNTTVFGVAGQSL QVSCPYDSMKHWGRRKAWCRLQGEKG PCQVRV SSTTCGLLSFLRWNWEHSHS QTIPWGGTITITLRLNLPQHDAGLYQCQS LHGSEADTLRKVLVEVLADPLDHRDAG DLWFGDLRASRMPMWTASPLRLAR EGR*WEEKPRRSPTRDQPSLHTCHLATR TPCSALARDYSA |
| 2767 | 10818 | A | 3700 | 226 | 854 | RVPGTGLNMSGIALSRLAQERKAWRKDH PFGFVAVPTKNPDGTMNLMNWECAIPG KKGTPWEGGLFKLRMLFKDEYSPSPKCK KFGPPLFPNCVTS GASCLFLEEDKD W RPAITIKQILLGQELLNEPNQDPAQAEA YTIYQONRVEYEKRVRAQAKKFAPSCRS SLEPSRTWAVLLLSLPQVSI SLRHFLC VYMAFCLCCCLE |
| 2768 | 10819 | A | 3701 | 813 | 1637 | TCQGIALSRALQAEYKAWRKDHPFGYN AVPTKNPDGTMNLMNWECAIPGKKG PWEGGLFKLRMLFKDDYSPSPKCKFE PPLFSPRIVYPSGAKCACPSLEEDQRTW RPSPTTIQTRFLRLNRYNFKLWNPNDQF SFQAEAYTIYQONRVESYEKRVPTKP RKFCAPHKQRPQGNRQKERDWFQELV YNIFCKSKVCSTMTSHLGGVGRAPSSH CPRGRVSRRLNCPVSIQGSFLRCFCIF GLLCKTRLFILJLMSSISTAVKL |
| 2769 | 10820 | B | 3702 | 236 | 362 | KQEPQPCQGGKDAAVLQGSQPSLAGIR TTRLRDPSKKWPKGX* |
| 2770 | 10821 | A | 3703 | I | 808 | TPFLAMAPALLIPAALASFILAFGTGV EFVRFTSLRPLLGGIPESGPDARQGWL AALQDRSILAPLAWDLGLLLFVGQHS MAAERVKAWTSRYFGVLQRSYLFACTA LALQLVMRYWEPIKGPVLWEARAEPW ATWVPLLCFVLHVISWLLFSUFLVFDYA ELMGLKQVYHYVLGLGEPLALKSPRAL RLFSHLRHPVCVELLTVLWVPTLGTDR LLAFLLTLYLGAHLGDQQLRLYRLA QLQRKLHLLSRPDGEAE |
| 2771 | 10822 | A | 3704 | 221 | 1728 | GQAGCSDTMGSCCLNRDSVPDHNPT KFKVTNVDDGVELSGVMELTQSELV LHLHREAVRWPLYLCLRRYGYDSNLFSP ESGRRQCTGHGFAFKCSRAEIPNLLQD LMQCNSINVMEEPVIITRNHSPAELDLPR APQPPNALGYNVSSFSNGCPGEGPRFSA PQRLSTSLRHPSLGEESTHALIAPDEQS HTYVNTPA SEDDHRRGRHCLQPLPEQQ APFLPQARGPDQRPQVFLQPGQVKFVL GPTARRHMVKKQGLCPSLHDPPIHNN NNEAPSECPAQPKCTYENVTGLWRGA GWRLSPPEEPWGNLAHRRALLHYENL PPLPPVWESQAQQLGGEAGDDGDSRDG LTPSSNGFPDGEDETLQKPTSTRAAIR SHGSFPVPLTRRRGSPRVFNDFRRPGPE PPRQLNYIQVKLGWGGDRPKGPQNPS SPQAMPPTTHPARSSDSYAVIDLKKTVA MSNLQALPRDDGTARKTRHNSDPL |

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| 2772 | 10823 | A | 3705 | 1143 | 1849 | PAILSPNLDLNFVSRAVSPTLAPSAPSA SSSPARIPAAATRRQRRSPRIIPAPSNEASP APGRPRVPGAAPPRFPKFTIQASGADRA VDCGILKLQKSPARLARERWRFRPSKRFR WSAAGSVEEQKPPKAP/PAKSPSEQSPQL SVLPLATITTPQAYGASFEKMNKLTRRG GRSRWHFPFNVIPQAPSLKW/GFTQSDAS SAEVFHVDRSLASHKMGGRPRPSFLW APFFWNPKH |
| 2773 | 10824 | A | 3706 | 130 | 360 | SLPKKNPDLHGFGVKFYQTFKEKIPASS SSNK/PQDIYEASITL/IKPDQDFRKKEN CSSVSLIIFPEIINKILEN |
| 2774 | 10825 | A | 3707 | 46 | 292 | DQASSGNGVTMIARRNPOTLRFLDEAR SLPPPKLTDPRLLYIGFLGYCSGLIDNV RRRPIATADKKTGYGEIFEKHPH |
| 2775 | 10826 | A | 3708 | 269 | 476 | STCLGLPRCWNYRREQRLVYV*FVHL YVF |
| 2776 | 10827 | A | 3709 | 448 | 894 | DQASSGNGVTMIARRNPEPLRFLDEAR SLPPPKLTDPRLLYIGFLGYCSGLIDNV RRPIATAGLHRQLLYINGLFFLLGYLY VKUREDLYAVRDREMFYIGNLHPEDF FLKEDKWTYGEIFLKNSHPHLKLVLQKC LAFSH |
| 2777 | 10828 | A | 371 | 2 | 1309 | EQQDLQDPLEVFHPTVEAAEALHIQEP GGEPSQPTQLPGGAPNTRPPHQQGALWS V*RAFEQELHQDGRQPTG*QWLRTCSLG WPEAQLFAHLIGQADWPSQRPP*DPE*TP PRPQNPGPSNWRTCFATPCTGWA*AT TQIRMIENGKPELPGPSPGEVPLGQQQV PGVPSGPPGPQAPPGGLLHSHNHHQSGV FNEFLFPWFGGSGEAGPYNGHSASSTP CPTGRCKPATFRRRR*PPGHVPWATTKS RGM/TAATAGPWGSLGNTARHPDGEA EPGS*ARAQLASNPAPHLRVP*PQLRLPH SPFPWVPKGCRTWRQPEGMTCYAWAH ELRPALPQPPRGTP*SFVLVHSPACPAQ ALPPNLYCPGGGWEVEAQHPAQMTVP LEAPHPHWPTGG*VSPYPSGPAQGGAA EVGGCLSIKETPCNV |
| 2778 | 10829 | A | 3714 | 1 | 948 | |
| 2779 | 10830 | A | 3715 | 644 | 2034 | AIETQAITDNCSEERKTFLNVLQVMNSMD IRCSDIHQDGTQGPSVIAFISYSSLGNINA TFEEMDKKDQVYLSNQVVSAAIGPKR NVLSLKSXTLTFQHVKMTPSTKKVFCVY WKSTGAG/CSQWSRDGCLFHVNKSH MCNCSLSSFAVLMAITSQEEDPVLTVI TYVGLSVSLCLLALALFLCKAIQNT STSLHLQLSLCLFLAHLFLVAIDQTGHK VLCSIIAGTLHYLYLATLWMLLEALYL FLTARNLTVVNYSSINRFMKLMFPVGY GVPATVVAISAASRPHLYGTADRCWLH LDQGFMSWFLGPVCAIFSANLVFLV WILKRKLSLISEVSTIQNTRMLAFKAT AQLFILGCTWCLGLLQVGPAAQVMAYL FTIINSLQGPFIFLVYCL/LSAQVQVKQY QKWFRFIVKSKSESETYTLSSKMGPSDK PSEGDVPKPTSEEKIL |
| 2780 | 10831 | A | 3716 | 1 | 451 | FFFFFVVRQDLALSPRLCNGIIFAHCNLC LPDSSDPPTSAFQVARTTGRNYYAQLNL YFFVETEFAMLTRAGLNLSSRGPLASA SQSVGDYRNSHIAQLIFCIFGRDRVSL WCPEWSQTPEFKRSACLKPCWDYRGE PHVPVPSAL |
| 2781 | 10832 | A | 3717 | 1 | 5898 | |
| 2782 | 10833 | A | 3718 | 1 | 333 | |

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| 2783 | 10834 | A | 3719 | 1 | 5699 | VNDNTINTAGSPGEVLSRRVCNLLKLTALR PDMWPKSELKIQWFDKLLMTVEQPNQV NYGNICTGLLEVLFSLLTVLQSPAILSSFKP LQRGIAACMTGCKNTKVLRAVHLSLSRL MSIFPTPESTSSVASKYEELCLYAAVVGK VIYEGLTNYEKATNANPSQLFGDQGSW VTLAPGTLMLKSACSNPSYIDRLISVF MRSLOKQMVREHLNPQAASGSTEATSGT SELVMSLELVKTRIAVMSMEMMRKNFI QAIL |
| 2784 | 10835 | A | 372 | 475 | 928 | NLVACSLPISPETLSPVPLTPKPSGLLALS LGLAFLSCPGLATPSPLTPKQGTAGPPQ PCPCSGLAPQTLYLSRRRLGGWRPSIPAQ MTPINRPESQTPVFELEAPHWPWTGG*VS PYPSGAQGAASEVGGCLSIKETPCNV KKKKKK |
| 2785 | 10836 | A | 3720 | 109 | 11749 | ARRGERRLVELMDPILFSGEANGPKRKM AFVATQGAETEVDQTLMLKKYLQFVAAL TDVNTPDETKLKMMHEVSENFENGTS QYSTFLEHIIPRVLTFLQDGEVQFLQEK AQQLRKLVLBIHRIPTNEHLRPHTKNVL SVMFRFLETENEENVLICRIIHLKQFR PPITQEIHHFLDFVKQIKELPKVNNRYF ENPQVIVENTVPPPEMVGMITIAVKVNP EREDSETRTHSIIPRGSLSKVLAEAL |
| 2786 | 10837 | A | 3721 | 106 | 11708 | RRFERRPMPRHEVYTPPLVLOPLSLVSP WKSQHIIFRVLNTNIDGRRKNPLPITA HLRVWARRYAHVVLKADIDLTKRAG ELTVEIVERVIT/SMQNPQYQDKPCTG FFEQDKDKVDKDKITARVLAQWVWTT SRERPGSRLEERFRAIKGLRHLFGLS CSEGAHPRPRTWPAVGRHRGASAGARR |
| 2788 | 10839 | A | 3723 | 6 | 297 | GIRPRKREGAASEADKGPKEPLEYGA KLSFQSCGKAFQRHDLARHSHLHV LKDKARPFQCRYCVKSTQNYDILLRHE RLHMKRRSKQALNSY |
| 2789 | 10840 | A | 3724 | 201 | 403 | |
| 2790 | 10841 | C | 3725 | 78 | 422 | |
| 2791 | 10842 | A | 3726 | 591 | 966 | EVLVTMALTRPSAASSKPQSSWPQCL DSSHWPSPVAHLPTSYSGRE/GDKHTLSK RELKELIQKGAPPLASKLQDAEIALRM EDLDRNKDQEVNFPKRYVTFPGGAFAF ESTIEGLKRVEK |
| 2792 | 10843 | A | 3728 | 165 | 828 | KEKARGRPKPLLLPITSATTAMGLTSS LFSRLFGKKQMRMLMVGDLAAAGKA/TIL YKLKLGIEVITIPITIGFGVKTIGYRNICF HSMGMLGGPDRIRPLWKHYFQNTQGLI FVVDSDNRERIQEVADELHKMLVDEL RDPVLLLFANKQDLPNAMAISEMTDK LWLQSLRNRTWYVQATCATQGTGLYEG LDWLSNELSKQLNEIGYLTQGPWFG |
| 2793 | 10844 | A | 3729 | 191 | 1574 | GVSQRDLTRLFGFSSPQLKKKLDAWLS EDMNYARFITAASARRNPSPIRMTDILS RGPKSMISLAGGLPNPNMFPFKTAVITVE NGKTIQGEEMMKRALQYSPSAGIPELL SWALKQLQIKLHNPTIHYPSQGMDC VTSGSQGLCKVFEMINPGDNVLLDEP AYSGTLQSLHPLGCNIINVASDESGIVPD SLRDILSRWKPEDAKNPQKNTPKFYCYC FQMGNNPTGNSLTSEKKEIYELARKYD FLIIEDDPYYFLQFNKFRVPTLSMDVDG RVIRADFSKIISSGLRIGFTGPKPLIERY ILHIQVSTLHPSTFNQLMISQLLHEWGEE GFMAHVDRVIDFYSNQKDAILAAADKW LTGLAEWHVPAAGMFLWIKVKGINDK VELIERKPLKMGVLMPLGNALFLRIAQ LPSPYLRASFSSAPQMDVAFQVLAQ LIKESL |

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| 2794 | 10845 | A | 373 | 2 | 643 | PICLFSRPTLRPSRSKVSLEGRGANMAA RWRFCVSVTMVVALIVCDVPSASAO RKKEMLVLEKVSQLEWETNKRFPVIRM NGDKFRRLVKAPPRNYSVIVMFTALQ LHROCVVCVKQADEEFQILANSWRYSA SAFTNKDIFFAMVVDDEGS/DMYFQML KH*ISAPNPFSTLQKGKPKRGIDTYELQ VRGFFQLRQISPWLADRTDVQY |
| 2795 | 10846 | A | 3730 | 2 | 454 | RSFFFFCEVGSWVGSMRVVMARLLSEG EQCIPTACAAFAQPGGRPRRLAGVGE GGPQCSWVNYRCTLFLVSLGLTDLAR GRGNSATGPITAPADSKQLSCKTTFIAVLS LSKEAGFCNVVQGWVSTSWGSSSPVPQ FFPKLLEFTGQ |
| 2796 | 10847 | A | 3731 | 379 | 640 | DGVSLCYPGWNTVAQSQLTVGSISWAQ VILQTPPRVAVAPGRITTVYRDRVSLCC PGWSGLIVLGLKPPRVLGITGMGSPQPRP GI |
| 2797 | 10848 | A | 3732 | 373 | 598 | YPCPPE/RCAQRHQACLPLSLERKCVIS LPPSPHQTFAGPKGLGHGDALSGLWP QTPSCEPTQTPKSNQNLV |
| 2798 | 10849 | A | 3733 | 2 | 444 | |
| 2799 | 10850 | A | 3734 | 151 | 485 | SPRGHYQLLSGRALADRYRRIYTAALN DRDQGGGSGAGHPAS/RSNENLNTVIIPDI KLHSNPSAFNIYCNVRHC/VLEWQKKEIS LAAASKNSVQSGESDSEEEESKEPPIN |
| 2800 | 10851 | A | 3735 | 1 | 176 | |
| 2801 | 10852 | A | 3736 | 1 | 6570 | |
| 2802 | 10853 | A | 3737 | 114 | 14222 | AAPVAAPGALFMPVPDGSVAAAAGLGLG LPAADSPGHYQLLSGRALADRYRRIYT AALNDRDQGGGSGAGHPASRNKILNKK KLKRKQKSKSVKTRKSENLENTVIIPD IKLHSNPSAFNIYCNVRHC/VLEWQKKEIS LAAASKNSVQSGESDSEEEESKEPKIL PKIIEVLGCEVFELIKETRFSHPSLCLRSL QALLNVLOGQOPEVLQSEPPVLESFLQ LLEITVRSTGMNDSTGQSLTALSCACL |
| 2803 | 10854 | A | 3738 | 373 | 662 | CRKNSCYQAQNFNLRIPFSTTKLNLHFH *NDSQKST*/SDSHLARSSQFCSLN*NY*I *TAKSHDVVCTRQHFFPSLSESYIWHVKE KKYNPTAAAI |
| 2804 | 10855 | A | 3739 | 29 | 658 | LSVASLSFLPNASAEDTMSRLSRLLWA ATCLGVLCLVLSADKNTTQHPNVTTLAPI SNVTSAPVTSPLVTTTAPETCEGRNSCV SCFNVSVVNTTCFWDCKDESYCSHNS TVSDICQVGNITDFCSVSTATPVPTANS VAKTHSSPPLQLPRQLLHQQTNTNTV NSVTSQPVRSKSTDAASFVIGIVLVLEIR HTRNYIPDLKK |
| 2805 | 10856 | A | 374 | 562 | 766 | GKSISRYPLYPFVIFYFYFLETSCSSAQA GVQWRNLGSLQSPPSGSSNSPASAS*VA ETTGERHHQ |
| 2806 | 10857 | A | 3740 | 1 | 183 | KKGLSPEQDIKFSGHVSVWGKTSMEVK MQMFQPAFVNPFLIPESPEEELFRQCEK TLICL |

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| 2807 | 10858 | A | 3741 | 185 | 1548 | LNQGPONPKKQGNFHIIHETSSSIHANHV RDKLREIVKASTNWRDHWKAMEERKLL HSFLAKSQDGLPPRRMKDSYIEVLLPLGS EPLEKREYLTQNTVRFGRILEDLDSLGR FLFCYMHNKIHSKMSPLSIVTALVDKID MCKKSLSPSEQDIKFSGHVSWVGKTSME VKMQMFQLHGDEFCPVLDAFVVMVAR DSENGKPAFVNFLIPESPEEELFRQGE NKGRIAPSSTSLLKMAPSAEERTITHE MFLSTLADPKTISFRSRVLPNSGSGWEN SKLKEFWEI/CAHPSGSRNIFNRILVGLM RKAAYELAWATACSFVGGSRFFVGAVIDA IMFQNPVEVGSLLFLSSQVCFIQNNYR QVRVHSEVALPQEKPAIQPHMSPHFH RFHVGGKESAPLVFPKTYGESPCCTLD GQRAFPTPMSGPATLEKGTFLVEPLRTP TIC |
| 2808 | 10859 | A | 3743 | 2 | 286 | TALQRHSEPSKLTfVGE LAHGRFSAK/M GTLALGVYHGLPASHMELAQELMETCY QMNRMQMETGLSPEIVHFNLYPQGRRDV EVKPADRIINLLRP |
| 2809 | 10860 | A | 3744 | 1 | 287 | |
| 2810 | 10861 | A | 3745 | 1 | 339 | RPLLAFLREEEQKMRPEIAGLKPANPPVL PAPQKADTDPENLPGMG*PSGQPRVQL CPGS*SLRCPQSKGLEGLP*LQRPAPGL ALVFTSWTQSSWPPRRRLGGLDGKSV |
| 2811 | 10862 | A | 3746 | 2 | 991 | |
| 2812 | 10863 | A | 3747 | 1 | 2296 | FRVDGAAMAACEGRRSGALGSSQSDFL TPPVGGAPWAVATTVMYPPPPPPPHRD FISVTLSPGESYDNSKSWRRRSCKWKWK QLSRLQRNMILFLALFLFCGLLYFYNLA DHWKALAFRLLEEQQMRPEFAGLKPAN PPVLPAPOKADTDPENLPEISSQKTQRHI QRGPPHLQIRPPSQDLKDGTEAATKRQ EAPVDRPEGDPQRTVISWRGAVIEPEQ GTLEPSRAEVPTKPLPARTQGTTPVH/ LNYRQKGVIDVLLHAWKGYRKFAWGH DDLKFPVSRSPSEWFGGLTLIDLALDTMW ILGRKEFEEARKVWSKHLHFEKDVDVN LFESTIRILGGLLSAYIHLSDSLFLRKAE DFGNRLMPAFRTPSKIPYSDVNGTGRA HPPRWTSQSTVAEVTISIQLEFRELSLTG DKKFQEAWEKVTQHIHGLSGKKDGLVP LPHQLPTVGLFTHLGVFTLGARADSYYE YLLKQWQGGKQETQLLEDYVEAIEGVR THLLRHSEPSKLTfVGE LAHGRFSAKMD HLVCFLP GTLALGVYHGLPASHMELAQE LMETCYQMNRMQMETGLSPEIVHFNLYP QPGRRDVEVKPADRIINLLRPETVESLFY LYRVTDGRKYQDWGWEILQSFRRFTRV PSGGYSNNVQDPQKPEPRDKMESFPL GETLKYLFLSDDDPNLLSDAYVFNTE AHLPIWTPTGLGWMAAGVGTSGGQRHL AGSVAFSGPRRRHQPPSPGSGELGLGF LLVSALIRTP |
| 2813 | 10864 | A | 375 | 23 | 483 | NGVLLSSRLKCSGAISAHCSLCLLGSSNS PTSASQVAGITGAHHHTWANFCI/YFF*V EMGFHHVGQAGLELLTSDDPALASQS AGITG/GEHLRLAVTYLNKHERGSLSS CLPSAWKWLCLCSCFWPKCLALCHF KHYYRRKQVGHSTK |
| 2814 | 10865 | C | 3753 | 150 | 584 | MHPSCCPCICKPFSTLVKSHVTASASSVP DSTCLRRGQSCSEVVLWQDRVSFQARE LKAIVINSVQTSSCFIRHLPRVSSSAIAEG VTSVAIISSSSPSAGGALLWSA*PFETQOT AVAPPASLETGLGFHLQPHLLHTAGSGF** |
| 2815 | 10866 | A | 3754 | 292 | 483 | |

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| 2816 | 10867 | A | 3755 | 84 | 316 | GGKLNKLYLFTYSY*PLSFPWHFLAAS RAQQGEVMLRACRLDPKTSQMAGEW LK YQLSTFLDAGSVNWKFSSLL |
| 2817 | 10868 | A | 3756 | 423 | 1186 | |
| 2818 | 10869 | A | 3757 | 222 | 435 | PCFLALAVCCVSKKGADHSSAPPADGD DEEMMATEVTPSAMAEITDLGCLMKH EDVCTALLITAFHSLAW |
| 2819 | 10870 | A | 3758 | I | 936 | MAEPPTKALDMLDAEKSAILGLPQPLLE LNDSPVKTVLERMQFFSTLYEN/CECP WVQLFI*CTEHYEAALVSPILGFLTLYLHC GEDEAADENPESQEMLEEQVLRMLTRE VMDLITVCCVSKKGADHSSAPPADGDD EEMMATEVTPSAMAEITDLGCLMKHE VLSGTLADAVTWLFTSVLKGQMHGQ HDGCMASLVHLAFQIYEALRPRLYIRA VMEQIPEIQKDSLQFDCKLLNPSLQKV ADKRRKQKFKRLIAGCIGKPLGEQFRKE VHIKNLPSLFKKTMPMLTEVLDNDGGG LATIFEP |
| 2820 | 10871 | A | 3759 | 30 | 3498 | VAIVRHFGLOILEHVVKFRWNGMSRLEK VYLKNSVMELIANGTLNILEEENHIKDAL SRIVVEMIKREWPOHWPMDLIELDTLSK QGETQTELVMFILLRLAEDVVTQTLPPQ RRRDIQOTLTQNMERIFSLNLTQENVN KYQOVKTDTSQESKAQANCRVGVAAALN TLAGYIDWVSMSHITAENCKLLEILCLLL NEQELQLGAAECLLIASVRKQKLEDRKP LMVLFQDVAHMYILSAAQTADGGGLVE K |
| 2821 | 10872 | A | 376 | 129 | 365 | NYYTHLYANIFDTLEERGKFL/DKQNLK LEQTGKAQGFYDLKLKLN**L*SLLTCK ASGRGPLLGNSFQ*RRKMTPL |
| 2822 | 10873 | A | 3760 | I | 168 | PLKRSDGCNDGRPTPTPTDPTVFTSNL KQTRMVHLTPVERVCRYCPVQKQKPG |
| 2823 | 10874 | A | 3765 | I | 234 | |
| 2824 | 10875 | A | 3766 | I | 1697 | LRAAGGGRTPMPSFEALQRVGEFGRFQ RRVFLLLCLTGVTF AFLVGVVFLGTQP DHYWCRGPPSAAALAERCGWSPSEEWN RTAPASRGPEPPERRGRQRYLLEAAND SASATSALSACADPLAAPNRSAPLVPCRG GWRYAQAHSTIVSEFDLCVNANWMLDL TQAILNLGLTGAFTLGYAADRYGRIVY LLSCLGVGTGVVAFAPNPFVFIREFL QGVFFSLTWMTCYVIVTEIVSGKQRIV GIVIQMFFTLGHILPGIAYPIPNWQGIQLA ITLPSFLFLLYWEVPESPRWLTRKKGD KALQILRRIAKCNGKYLSSNYSEITVDE EASNPFLDLVRTQPMRKCTLILMFAWF TSADVYQGLVMRLGIIGNLVYDFHISGV VELPGALLILTIERLGRRLPFAASNIVAG VACLVTAFLEPIGIAWLRITVATLGRLGIT MAFEIVYL VNSELYPTTLRNFVSLCSSL CDFGGHAPFLLFRLAAVWLELPLIIFGILA SICGGLVMLLPETKIALPETVDDVEKLG SPHISCKGRNKKTPVSRSHL |
| 2825 | 10876 | A | 3767 | 103 | 370 | IGVPGAISSSASGRLAVALGTILSFSFSISE FFRFWLRVVGGQVDLSGDVVCYTPLFIF LSALSLEDYSPETKVFK*LTKHDSHMT GN |

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| 2826 | 10877 | A | 3768 | 97 | 1639 | CPLQWICAINNISROIYLTNDNPEAVA IKL NQTLAQAGTPTTSGKKQESSCPSONLK NSEMENENDKIVPKATASLPEAELIAPG TPIQDIVLPATEFLDQNRGSRRTNPFGE TEDESFPFEADQOQVEVNEILSGKCCPLD SLLQOMFIVRFLGSMAYKTDSTTEVIYE AMRQVLAARAIHNIFRMTESHLMVTSQS LRAPGGRGGCGRSFSRLKCSCLPAIKRA AGLPAQRLSSAKGQTASSSESLTVVFD GETPPSRNRQTPHIGEQQLASGHQHQR KYVDKSTKMRKKQHRKAENSKNQNASPP PKDHNSLPAREQNWTENEFEETTERGFR SDRENGTKLENTLQDIQENFNHLARQA NIQIQEIQRTPQRYSSRRATPHIIRFTKV EMKEKMLRAAREKGOVVTHTKGSIRLT ADLSAETLQVRREWGPIFNLKEKNFQP RISYPAKLSFISKGEKFFTDKQMLKDVV TTRPALKELLKEALNMERKNQYQPLQK HTKM |
| 2827 | 10878 | A | 3769 | 159 | 277 | |
| 2828 | 10879 | A | 377 | 67 | 224 | |
| 2829 | 10880 | A | 3770 | 1 | 474 | HPPPTMALKRIHKELNDLARDPPAQCSA GPVGDDMFHWQATIMGPNDBPLYYG GVFFLTIPFPQITPKPKVAVFTTRIYHP NINHNQGISCLDILRSQWSPALTISKVLLS ICSLLCDPNDDPLVPEIARIYKTDRKEY NRIRAEWTKQYAM |
| 2830 | 10881 | A | 3771 | 153 | 291 | |
| 2831 | 10882 | A | 3772 | 1 | 336 | |
| 2832 | 10883 | A | 3773 | 1 | 2336 | MVRSWLTATSASOVQAILPQPCKTOLN FTVAIDFTASNGETRMSEKVGGNPLOPT SLHYMSPYQLSAYAMALKA VGEI IQDY DSDKLPAYGFGAKLPPEGRIHQPLNN NDEDFPCAGIEGVLESYFQSLRTVQLYG PTYFAPVINQVANSWSSVLTGTDSEPA VEVPQYVGIRLLVGEFTIKKPMAMCHRR MGVRPAVPLLTQRSGEGKDSGTPTHSL HTKAQLPSPHVLRHQGVLRROHSLV GTKALSTTGKALRTLPAKVIFSLPGPW HRR*AGRDSAGR*AAEDSLRFHSSV SHHWKP*SQWLL*SSAVSWAEAGELLE PGRRLQ |
| 2833 | 10884 | A | 3774 | 1015 | 1292 | AGRAWWRMPYNPQHFRFRVVDHLRS GVQDQGOHQHGETPSLLKGPKIGWAWW RTPVIPATWEAPGELLEPRQLRQVVSQ DRITLQPGQE |
| 2834 | 10885 | A | 3775 | 183 | 511 | SCHFGRRLRWADCLRSIQDQPGQHGETL SLLKIQKILARSOGTCLQSOLLARLQEN HPSLGEGCSEPRSGHCTPAWARV/GHS VLKTNEQKNSSTLTHKSHWIFQPGH |
| 2835 | 10886 | A | 3779 | 60 | 361 | |
| 2836 | 10887 | A | 378 | 436 | 829 | NLREFFWAPCPVLHYKFSSKLNWIPVT L*GGSHILPSATLKKQIYGEKKLKAADC DLQITNAQTKEEYTDNALPKNSSVIVR RIPIGGVKSTSKTYVISRTEPAMATTIKAV CKNTISHFFYTLTLLPL |
| 2837 | 10888 | A | 3780 | 2 | 616 | ERTEKSDRAVRSGAPHADGSRFAVFCAC IWRWRVGGRGSCCTGRPSWGASSAVT RGPHVTRSCRATQPSLQSSLAGYQLPA ALSSARSAGPGKSGAGSATAKCSSGAP RGENPEKETARIGPGKTKKMEOPYAR MEEDR/HLWGGEGPPSPARKIERGKA RFTCPNFRMGFPYNNRPESMDXGDKWM EMDMGKYSMGG |

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| 2838 | 10889 | A | 3781 | 2 | 888 | RQRQRPRAGPAGRTGGQKAPGARVPVPG PAMEGASFGAGRAGAALDPVSFARRPQ TLRLVASFVFSIAVFGPIVNEGIVNTDS GPELRVCVFNAGACRFGVALGLGAPL ACAAFLLLDVRFAQISSVRDRRAVLDD LGFSGLWSFLWFVGFCLTNQWQRTAP GPFVTHAGDAARAIAIAFPFISLWVAL TVKALQRFRLGDTMSLFATEQLSTGASQ AYPGYPVSGVGVEGTETYSPPFTEILDTS PKQYQVAPYRLAGTDQGSKATPTPTQA PGSPGFLPGSSSVPRTE |
| 2839 | 10890 | A | 3782 | 1 | 1944 | MADRTKELESIPDSNRNGSIMGNSRDFA DFGTTIKQDFRLLGQTSVDRLLQLSQGG AVKGNQLLPVSLVKRKTTLAPNTQTASP RALADSLMQLARQVSRLESQDFADFG TTIKQDFRLLGQTSVDRLLQLSQGGAVK GNQLLPVSLVKRKTTLAPNTQTASPRAL ADSLMQLARQVSRLESQGWTLVPNWNT TQPLSGDILLIYKGFRCFRNHHTQGFSLA GANQRPLAATLSGPGGEGQSAVARLT GEKKN |
| 2840 | 10891 | A | 3783 | 1 | 578 | MVGEGRYPVLSLSDLEWRPDRQDASE VQRDPAGSAPLAEDVQVDPKRDSDSHSS ERFLEQSHSSMERAFEADYGRSCDYKVG SPSYLDKLLWRDNKPHHYSEPKLILDLS HWKQAAGAPPTATGLADTGAREDEPAS LFLENPQGVKSTQGAQNTAPRPTTPSA AWLPRPPPGPTLADSCSVTKWGVQ |
| 2841 | 10892 | A | 3784 | 861 | 2636 | GARGRPLAETWPFLTAPVLPQQLQTEPT MAEKGDCLASVYGYDLGGRFVDFQFLG PGVNGVLVASVDSRACRKVAVKKIALS DARSMKHALREIKIRLDHNDNVKVEY VLGPKGTDLQGELEKFSVAIVQEQYMET DLARLLEQGTLEAEHAKLFMYQLLRGL KYIHSANVLHRDLKANIFISTEDLVKI GDFVGLAKESINQHYSHKGYLSEGLVT KWYRSPRLLSPNNYTKAIDMWAAGCIL AEMLTGRMLFAGAHELEQMQLIETIPVI REEDKDELLRVMPSFVSSTWEVKRPLRK LLPEVNSEIDFLEKILTFNPMDRLTAEI GLQHPYMSPYSCPEPTSQHPFRIEDEI DDIVLMAANQSQLSNWDTCSSRYPVSL SSDLEWRPDRQDASEVQRDPAGSAPL AENVQKDPKRDSDSHSSERFLEQSHSSME RAFEADYGRSCDYKVGSPSYLDKLLWR DNKPHHYSEPKLILDLSHWKQAAGAPPT ATGLADTGAREDEPASLFLAIAQWVKS TQGAQSTPTRPPTPSAACLPRPVPPGP GRRRVRQPPVRGRVHLRPEALHQARG PAGQ |
| 2842 | 10893 | A | 3788 | 1 | 167 | |
| 2843 | 10894 | A | 3789 | 1 | 1685 | NTIHTDIETYLSRCVWCCVSAIARARA ALPNIIVGEKGGAGSARSSPRRAAECA QIPQPRRSPAVQAEARRSRFPFTLQGA FSSAIIAGIGGTSAAYYLRQKPGKDVKI DLFEREEVGGRLATMMVMVQGEYEAGGS VIHPLNLHMKRFVKDLGLSAVQASGGL LGIYNGETLVAFESNWFINVIKLVWRY GFQSLRMHMMWVEDVVDKFMRIYRYOS HDYAFSSVEKLLHALGGDDFLGMLNRT LLETIAQKPGCSEKLNEMIGPMRVNRY GQSTDINAFVGAGSLSCSDSLWAVEGG NKLVCSGLLQASKSNLSGSMYIEEKT KTKYTGNTPKMYEVVYQIGETETRSDFY DIVLVATPLNRKMSNITFLNFDPPHIEEF HQYYQHIVTLVKGELNTHSSSRPIDKF GLNTVLTITDSDLPFNSGIVPVSREKEDP EPSTDGTYYVWKFQETLTKAQILKFLFS YDYAVKKPWLAYPHYKPPFEKCLLSF SHDRIYVYI MCHCAASAAACACATAAII |

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| | | | | | | SHDRLYYLNIGIECAASAMEMSAIAAH NAALLAYHRWNGHTMDIQDGLYEKL KTEL |
| 2844 | 10895 | A | 379 | 74 | 378 | GCTKDSNIYFIKEHFQSVNNHIKRLISFL IRVM*LPKQOVINTIPIRMAKIP*KAENSK CWQECGAAVTLMH****V*LPKLSWHFL KLSTCLFYDLAIPL |
| 2845 | 10896 | A | 3790 | 52 | 264 | QSFAPGPPFPFPWGGGRAGGFPFGMG/ PPPGPPGGTSSSSKIPKFGPRGGPPFPPL PKRVRPGDFYF |
| 2846 | 10897 | A | 3791 | 627 | 1524 | SHGENCKPSTGDYRKLIYHLKGCQGLR NKGSSPFTSIVSAAKVCGAASESPSVKSL CLLVADQDQSFKAGQWVDFPIGVSVVG GFSICSSRLLEQERVELAVKYTNHPPA LWVHNTCTLDCEVAVRVGGEFFDPOF ADASRNVLVLAGGVGINPLLSILRHAA/D LLREQANKRNGYEIGTIKTILQCKKYPAE LLFKKNILDVNEPPEKIACSLHVTKTDY TNPMRNSKPYITEGRITEKIRDHISKETL FYICGPPMTDFFSKQLENNHVPKEHICF EEVVVGGRRQOKK |
| 2847 | 10898 | A | 3792 | 331 | 756 | WKRSLKYLWLLRSHNSHPSSSLTPSLSPS AEAEDGDLQCLCVKTTSQVRPRHITS EVIKAGPHCPTAOL/IVSPRTASVSAPAC LLCPSLPLLMFANPRTESHVSSLFPARA TLKNGRKICLDLOALLYKKIIEHLES |
| 2848 | 10899 | A | 3793 | 3 | 402 | HEETQPEFPALSTEILLEALPOHELRSRV LR/AORPGLLFLGLLLPLVVAFR/RAEA EEDGDLQCLCVKTTSQVRPRHIHQPR* SKAGPHCPTCPT**PR*KNGRKIWLGTW QAPLLQCK*FKETFWESLAN |
| 2849 | 10900 | A | 3794 | 2 | 146 | |
| 2850 | 10901 | A | 3795 | 3 | 1034 | SEFFPARTPRRCPRPSPGAMGLTVSALFS RIFGKKQMPILMVGDLAAGKTSHLYKL KLGEIVTTIPTIGFNVETVEYKNICFTVW DVGGQDKIRPLWRIHYFONTOGLFVVD SNDIRERVQESAIDELQKMLQEDLRDA VLLVFSNKKQDMPNAMPVSELT/DKLG/L QHLSRTWYVQAHLPTQGTGFVTMV LDWL/SHELKALNQPWGRPLDARKSRC VQSPMTSQNSPTPRGKCPFPFISLPHSP QASASAPCSCLIHLVSVVGAVEPLLSGHR GVPLFLPAGTYGRGFAGRPSPSSRGAGI WVSFFFFCFGCTLGGQVGRGXVRAFGW CYNVALDLE |
| 2851 | 10902 | A | 3796 | 1536 | 1838 | GLPOOTLKRIQVVLKCLAFVLFLEFF LRWSLALLPILECSGVISAHCNLRPLGLG DSLASASRVAGMTTGTCHHAQLIFCIFS RDGVSVLARTVWIS |

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| 2852 | 10903 | A | 3797 | 2 | 740 | GRVGGQSTSKVPKEGLLSLHLLCSTAHYQ KTAEMKSIYFVAGLFVMLVQGSWQRSL QDTEKSRFSASQADPLSDPDQMNED KRHSQGTFTSDYSKYLDSSRAQDFLQ WLMNTRKRNRIAKRHDEFERHAEFT TSDVSSYLEGQAAKEFIWLVKGRGRR DFPGEGRLKLNLAGRHADGFSDEMN TILDNLPLARDFINWLIRTKITDRREYIT YSEHFTNITLLAHVGCLEMFKSW |
| 2853 | 10904 | C | 3798 | 204 | 272 | |
| 2854 | 10905 | A | 3799 | 1 | 350 | |
| 2855 | 10906 | A | 38 | 3 | 203 | HASDKMADKEKKKKESILDLSKYIDKTI RVKFGGREGEGGLPLSVPL*KFQINPA TEMMRTHAEA |
| 2856 | 10907 | B | 380 | 1 | 483 | MGQARWLTPVIALWEAEAGSGRGPSA AGLLEFARGPLQTLFAWVSAVAEQR FVNRECCCLIVPLEVLSQRSTRPCEVSV PYWENAFOLGCSGTVTVGSTVTLAECL KWLTTFQLVSGLAAYAMVDVLTGDDVV WLLNVAEWNFSVNIPNDSLS* |
| 2857 | 10908 | A | 3800 | 1 | 397 | QRPI*PTKPIGQVSKGHQPTRHDFTPQ LAAHETISRLVGSAGQVQYLDLKKNDP SKLFNEERLIDKTKVTYKWLPESESLFL ASHASGHLYLYNVSHPCASAPPQYSLLK QGEFESVYAAKYNDLFL |
| 2858 | 10909 | A | 3801 | 1 | 2066 | MAAGGAEGSGSPGAAMGDCAEIKSQFR TREGFYKLLPGDGAARRSGPAAQTPVP POPPQPPGPASAGPGAAGPASSPPAG PGPGPALPAVRLSLVRLGPDASAGAP PATPAGLGGSGDVRFCNLGRELYEYPGC CRRGSRQWHTPLTPFLPKSIDLNKPID KRIVKGTQPTCHDFNQFTAATETISLVLG PSAGQVQYLDLKKDTSKLFNEERLIDKT KVTYKWLPESESLFLASHASGHLYLYN VSHPCASAPPQYSLKQAWGFSFYAAK SKAPRNPLAKWAVGEGPLNEFAFSPDGR HLACVSODGCLRVEHFDSSMLRGLMKS YFGGLLCVCVWSPDGRVYVVTGEGEDLV VWSFTEGRVVARVARGHGHKSWNVAEFD SLYTTRAEAAATAGADGERSGEEEEEE PEAAAGTGSAGAPLSPLPKAGSITYRFGS AGQDQTFCLWDLTEDVLYPHPLARTRT LPGTGTTPPAASSSRGEGPGPLPRLSL RSNSLPHPAGGGKAGGPGVAAEPPTFS IGRFATLTLQERRDRGAKEHKRYHSLG NISRGSGSGSGGEGKSPGPVPRSLDPA KVLGTALCPRIHEVPLLEPLVCKIAQER LTVLLFLEDCIITACQEGLICITWPRPGKA FTDEETAQTEGGSWPRSPSKSVVEGISS QPGNSPSGTVV |
| 2859 | 10910 | A | 3802 | 1 | 1155 | |
| 2860 | 10911 | A | 3803 | 285 | 1444 | LLISPGPRLGAPSFPMAGHASDFAFSPPP GGGGDGPGGPEPGWVDPRTWLSFQRPP GGPGIGPGVGPSEVWGIPCPPIYEFEC GGMA YCGPQVGVGLVPQGGLETSPGEG EAGVGVESNSD GASPEPCTVTPGA/VKL EKEKLEQNPEKSDIKALKELEQFAKL V/KQKRITLGYTQADVGLTLGVLFKGVFS QTTICRFEALQLSFKNMCKLRPLLQKWV EEADNNENLQEICKAETLVQARKRKRTS IENRVRGNLENLFLQCPETPHWQQNHSIA QQLGLKKHVVRVVRVWFCNRRQK GK/ RSSSDFA/QREDFEAAGSPFGGPGVSLFP VLPGPPIHGTGPGYGSHPHTA/LYSSVPFPE GEAFPPVSVTILGSPMHSN |
| 2861 | 10912 | A | 3806 | 3 | 225 | GQTSQHHVALRTTQHIIWALGQHRVAL JHTVEYLLALKRKEMDGTGCKWMELEYI VLSGISQSQEDMHCMIPFVSGP |

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| 2862 | 10913 | A | 3807 | 874 | 1444 | CQARPMPLRAFNPVSSFRWARGMTIVA ALMTVFIMQLVGQVPAALWVIFGEDRF RWSATMIGLSLALFGILHALAQAFVTGP ATKRFGEQQAIIAGMGPNALGYVLLAFA TRGWMAFPIMILLASGGIGMPALQAMW LAE*ITDTRANVRKRLLOQNVCDL.SNNMN GLRFPFCVKSCTGTPSVLTKRWH |
| 2863 | 10914 | B | 3808 | 1 | 1917 | MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIHAHGRRRAGRLAGVPTRGWM AFPIMILLASGASGCRVAGHAVQAALRA QGLLKEAEHVESQSAETVLTPTDECQLLG YLDKGKRKRKEKAGSLQWAYMAIARL GGFMDSKRTGIASWGALCAGAAVLFPVK TDLSGALNELQDEAARLSWLTATGVPC AAVLDDVTEAGRDWLLGGEVPGQDILS SHLAPAEKVSIMADAMRRLHLDLPATCP FDHQAKHIERARTRMEAGLKDLMRRD QDLIKRQDEDRSHDEQDDARRSPA RAYSAIAATTNSGRPVLFVKTDLSGAL NELQDEAARLSWLTATGVPCAALDDVV TEAGRDWLLGGEVPGQDILSSHAPAEK VSIMADAMRRLHLDLPATCPFDHQAKH RIERARTRMEAGLVDQDLDDEHQGLA PAELFARLKARMPDGEDLVTHGDAAC RISWWKMAAFLDSSTVAGWDIALATRDI AEELGGEWADRFVLVYVLLSGTLGFEM TDQATPNLPSRDFDSTAAPYERLFGGIVF RDAGWMILQRGDLMLLEFFAHPGLDPLA SWFSCCLRLDDLAEFYRQCKSVGIQETS SGYPRIHAPELQEWGGTMAALVRIFVKE PYFCGV* |
| 2864 | 10915 | A | 3809 | 1057 | 1905 | MVSISRPRDPPASASQAGITGPALGAEG ERAFHRHRVMIVTEGAPGGLSSGHLRDA MDSEAGTDDGCASHVRVVRDLKPSNI LYVDESGNPECLRICDFGAKQLRAENG LLMTPCYTANFAPEVLKRQGYDEGCDI WSLGILLYTMLAGYTPFANGPSDTPPEIL TRIGSGKFTLSGGNWNVTSETAKDLVSK MLHVDPHQRLTAKQVLQHPVWVTQDKD LPQSOLSHODLQVKGAMAATYSALNS SKPTPOLKPIESSILAQRVRKLPSTTL* |
| 2865 | 10916 | B | 381 | 119 | 955 | |
| 2866 | 10917 | A | 3810 | 1 | 2928 | |
| 2867 | 10918 | A | 3811 | 630 | 1159 | GAPWGOVPAALWVIFGEDRFWRWSATMI GLSLAVFGILHALAQAFVTGPATKRFGE KQAIHAGMAADALGYVLLAFATRGWMA FPIMILLASGGIGMPALQAMLSRQVDD HQGOIQGSLAALTSLSIGPLIVTAIYAA SASTWGLAWIVGAALYLVLCLP/LRRG AWSRAIST |
| 2868 | 10919 | A | 3812 | 1 | 3525 | |
| 2869 | 10920 | A | 3813 | 1 | 1606 | MLMKAHKVGLGEQEKVPRRLMKVLKG VPGEQEKVLWEAREEGVSSRWGSPMG CEQRVWVGDEQAMEPLGLADGKLWRT FMGAADAERKEGRGMKVAPAPAVVKK QEAKKVYNPLFEKRPKNFVGQDIQPKR DLTRFVWKPRIKLOHQRAFLYKRLKVP PAINQFTQALDRQTATQLELAHKYRPE TKQEKQRLLAQAEKTAGKGDISTKRL PVLQAGVNWEDKSALAKLVEGIRTNYN ERYNEIHIIHWGGNVLPSPESVARIKLLK ADGSLRLDFTVCKKAWIVSHPVSRQKLP QQRQRNRKQREVAQWGSQPCLSLVV GSEPATGGSCSETSGFGKCKVKETNP QPMMAATPTLEQGEAAAHAEIIPACSHG QVPAALWVIFGEDRFWRWSATMIGLSLAV FGILHALAQAFVTGPATKRFGEKQAIHAG MAADALGYVLLAFATRGWMAFPIMILL ASGGIGMPALQAMLSRQVLLSIGPLIVTA |

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| | | | | | 1YAASASTWNLAWIVGAALYLVLCPAL RRGAWSRATST |
| 2870 | 10921 | A | 3814 | 1701 | 1904 |
| 2871 | 10922 | A | 3815 | 1 | 427 |
| | | | | | MAKMKNQIIPSVGEKLEQQKPSYDARAF VTGPATKRFGEKQAIAGMATDALGYVL LAFATRGWMAFFPIMILLASGGIGMPALQ AMLSRQQLTSIGPLIVTAIYAASASTWNG LAWIVGAALYLVLCPALRRGAWSRATS T |
| 2872 | 10923 | A | 3816 | 1 | 1629 |
| 2873 | 10924 | A | 3817 | 1 | 1013 |
| | | | | | MMGLRNSYDVKERLKHQVRGGKAPKA VNSGKLLPFPRLKELAGVEGMNCYLG RTQPGTRMQWSPMKLSVELRAGQSRLL RESKGKEIPEPRCAAVGGKEPEAKPPKV PRPMPLRAFNPVSSFRWARGMTIV AAL MTVFFIMQLVGQVPAALWVIFGEDRFR WSATMIGLSLAVFGILHALAQAFVTGPA TKRFGEKQAIAGMAADALGYVLLAFAT RGWMAFFPIMILLASGGIGMPALQAMLSR QVDDDHQQLQVSLAALTSLTSIIGPLIV TAIYAASASTWNLAWI*PGMFIISNPY REHPLSFHRYHYPHEQKSLPHGGISDQT GKNRP |
| 2874 | 10925 | A | 3818 | 1 | 2634 |
| 2875 | 10926 | A | 3819 | 1328 | 2536 |
| 2876 | 10927 | A | 382 | 1 | 662 |
| | | | | | LGSCVTQTGVQWCGHSSLRPOTQAQAI LLPCLSNCDWYKHEPLHLAYVTQFCPLS FFPGGGWSLALSPMLCECGVILAQCCKL RLLGFTPTFCLSLPSSWDHRHPPLCLANF LNF/SVETGFHFLAQDGLDLTS/SIPPAS A/FPKCWDYRRDHRQAQPM*CNSDVNSL MLPQMPQVQ/AHQSPIGCPRFHTCRLG CPQTCTSHQLAANLEVPMTMSSSIH |
| 2877 | 10928 | A | 3820 | 1 | 1594 |
| | | | | | MSAAPCSTVPSPIDHRAEBCGHTARDW QVAPPAQSHDDDEEEEEDEEEEEEE ELLLAGSPYSPTVPCFLEPCLENQSRQ KQDKHTPGFKHKFOHAFFSFPLATITHS FWVAEHSRLLEGKOGAQISPHLQVGPGL VWQGYLWONREAGSSRDHILNMPGGM AAGHSHSGTLFSDQGLWEQCQLLKSTSV FARCHPLVDEPFVALCEKTLCECAGGL ECACPALLEYARTCAQEGMVLVYGTWTH SACSPVCPAGMEYRQCVSPCARTCQSLH INEMQOERCVDCGSCPEQLLDEGLCYE STECPCVHSGKRYPPGTSLSRDCNCTCIGR NSQWICSNEECPDREGHNSRQREVALSA QVGCNIHTPALVSGQVPAALWVIFGED RFRWSATMIGLSLAVFGILHALAQAFVT GPATKRFGEKQAIAGMAADALGYVLLA FATRGWMAFFPIMILLASGGIGMPALQAM LSRQQLTSIGPLIVTAIYAASASTWNLAW IVGAALYLVLCPALRRGAWSRATST |

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| 2878 | 10929 | A | 3821 | 3 | 995 | TSPTATGPALVCYRASLVALREEDTRSQ EYVFPGRNDRFAHVKKMGGLGLAMD VPEELGGAGLDYLAIAAMEEISRGCAS TGVIMSVNNLSLYLGPILKFGSKEQKQAW VTPFTSGDKJGCFALSGTFRFNPVSSFRW ARGMTIVAALMTVFFIMQLVGQVPAAL WVIFGEDRFRWSATMIGLSLAVFGILHA LAQAFVTGPATKRFGEKQAIAGMAADA LGYVLLAFATRGWMAFPIMILLASGGIG MPALQAMLSRQVDDDHQQLQGSLLAA LTSLTSIIGPLIVTAIYAASASTWNGLAWI VGAAALYLVCLPALRRGAWSRATST |
| 2879 | 10930 | A | 3822 | 1 | 619 | MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFPIMILLASGGIGMPALQAMLSRQVD DDHQQLQGSLLAALTSLTSIIGPLIVTAIY AASASTWNGLAWIVGAALYLVCLPALR RGAWSRATST |
| 2880 | 10931 | A | 3823 | 1 | 565 | MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFPIMILLASGGIGMPALQAMLSRQLT SIIGPLIVTAIYAASASTWNGLAWIVGAA LYLVCLPALRRGAWSRATST |
| 2881 | 10932 | A | 3824 | 1 | 934 | MTMWVLHCRAFTYFVSAWSKHGYAHAV TAKILYAGRIVAGITGATGAVAGAYIADI TDGEDRARHFGLMSACFGVGMVAGPV AGGLLGAISLHAPFLAAAVLNLNLLG CFLMQESHKGERRPMPLRAFNPVSSFRW ARGMTIVAALMTVFFIMQLVGQVPAAL WVIFGEDRFRWSATMIGLSLAVFGILHA LAQAFVTGPATKRFGEKQAIAGMAADA LGYVLLAFATRGWMAFPIMILLASGGIG MPALQAMLSRQLTSLTSIIGPLIVTAIYAASA STWNGLAWIVGAALYLVCLPALRRGAW SRATST |
| 2882 | 10933 | A | 3825 | 657 | 7035 | LRTCWHSDCQNTAADHSAQGSGRHRK PCNRCAPGSQNWAVPLLPDISCRTGCAV RKDRLIAGPIQ*N/LKTAVVGRQPYLTKL CLMLGCLGRMRWRCSTGWLRLRTSSVQ CS*RISNRMSCTGSMILTTLW*MKLQOVN GLGQGLIQSAGKDCDVOGLEHDMEEIN ARWNTLNKVAQRIALQEAALLHCQKF QDALEPLLSWLADTEELIANQKPPSAEY KVYVKAQIQEQLLQRLDDRATVDML QAEGRRI |

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| 2883 | 10934 | A | 3826 | 140 | 2298 | LFPRLLSFLTTPPHCSFSICFVICSRTLILK GSSLLITG/CTQFRLSETKETNPYAMRLYE SLCQYRKPDGSGIVSLKIDWHERYQLPQ SYQRMPDFLPLPAGALSLISKVTDRA DSMEQGAETSQAGALGTLANVVTSLANL SESLNNGDTSEIQPEDQSAEITRAFDTL AKALNTDSSSPSLADGIDTSGGSGIHVI SRDQSTPIIEVEGPLLSDTHVTFKSIREDR NGRSQKTVHTEGDMNMNIKIVKQATV LTFTTALLAGGATQAFAKENNOQAYKE TYGVSHTRHDMQLQIPKQQNEKYQVPQ FDQSTKINIESAKGLDVWDSWPLQADG TVAEYNGYHVVFALAGSPKDADDTSIY MFYQKVGDNISDSWKNAGRVFKDSKDF DANDPILKDQEQWWSGSAFTTSDGKIRL FYTDYSKGHYGKQSLTTAQVNVSKSDD TLKINGVEDHKTIFDGDGKTYQNVQQFI DEGNYSGDNHTLRDPHYVEDKGHKYL VFEANTGTENGQGEESLFNKAYYGGG TNFRKESQKLQOSAKKRDALANGAL GHELNNDYTLKKVMKPLITSNTVTDEIE RANVFKMNGKWYLFTDSRGSKMTIDGI NSNDIYMLGYVNSLTGPYKPLNKTGLV LQMGLDPNVDFTTYSHFVAPQAKGNV VITSYMTNRGFFEDKKAATFAPSFLMNIK GNKTSVVKNSILEQOGLTVN |
| 2884 | 10935 | A | 3827 | 1 | 2604 | |
| 2885 | 10936 | C | 3828 | 1 | 2076 | MNMNIKIVKQATVLTFTTALLAGGAT QAFAKENNOQAYKETYGVSHTRHDM QIPKQQNEKYQVPQFDQSTKINIESAKG LDVWDSWPLQADGTVAEYNGYHVVF ALAGSPKDADDTSIYMFYQKVGDNISDS WKNAGRVFKDSKDFDANDPILKDQEQE WSGSAFTTSDGKIRLFYTDYSKGHYGKQ SLTTAQSIREDNRNGRSQKTVHTERDMIM NIKIVKQATVLTFTTALLAGGATHAFA KENNOQAYKETYGVSHTRHDMQLQIPKQ QQNEKYQVPQFDQSTKINIESAKGLDVW DSWPLQADGTVAEYNGYHVVFALAGS PKDADDTSIYMFYQKVGDNISDSWKNA GRVFKDSKDFDANDPILKDQEQWWSG ATFTSDGKIRLFYTDYSKGHYGKQSLTT AQVNVSKSDDTLKINGVEDHKTIFDGDG KTYQNVQQFIDEGNYSGDNHTLRDPH YVEDKGHKYLVEANTGTENGQGEES LFNKAYYGGGTNFRKESQKLQOSAKK RDAELANGALGHELNNDYTLKKVMKPL ITSNTVTDEIERANVFKMNGKWYLFTDS RGSKMTIDGINSNDIYMLGYVNSLTGP YKPLNKTGLVLQMGLDPNVDFTTYSHF AVPQAKGNVITSYMTNRGFFEDKKA TFAPSFLMNIKGNKTSVVKNSILEQOGLT VN* |
| 2886 | 10937 | A | 3829 | 1 | 3603 | |
| 2887 | 10938 | A | 383 | 110 | 784 | AAAAASKVLM*TGGAAPQEQP*TTGGVQ A*APGSVA/AEGASVEGPGGDTAPAHQ GLSPTRSHQCGAGRASAHSDPPGGTG GWGFLKCGPACPERGKDGASASVPR GPYAEAEKGGWALRGLGVAAPGPSSR AGQAPSGLHTGPNARFAPWPPIGQGGGL RRDQAG*VSSWTGSTEGAHTAHRAFG HGGKGGSPQPHPGGPGQIPITHTRMHS CRITAA |

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| 2888 | 10939 | A | 3830 | 2455 | 3151 | DRRCPIFCLLPFGIRFILLFGSSSLQRGPFHIL FFFFLFFFPFILLLSILGSFFFFLLSPVLLLL HHFFLSLFPACLLHLLHLLQLVLAQQLG RCLHASSPTWCRGRGR/VLAGSRGPAGAE TEGPWTAEGGRGRNLARWRRRRRQORQ RRPLGKLGKWRRRQRAGWGGGGSGA ETRRAAAVRRAGGRAVQAVAGALGRG SSIPGPPPHQQSAADQPCPRREGNPLIRR RLP |
| 2889 | 10940 | A | 3831 | 1 | 2376 | MKLMETLNQCINAGHEMTKAIAIAQFND DSPEARKITRRWRIGEADLVGVSSQAIR DAEKAGRLPHPDMEIRGEVRQVRGYTIE QINHMREDVFGTRLRRAEDVFPFVIGVAA HKGGVYKTSVSVHLAQDLALKGLRVLL VEGNDPQGTASMYHGWVPDLHIHAEDT LLFFYLGEKDDVYIAIKPTCWPLDIIPS CLALHRIETELMGKFDEGKLPDTPH.ML RLAIETVAHDYD*FVQLYNQHVAAQPV/L GISISGCSRPAFSAISLIA*ETPTKSAASP ILQRRVIFLASGLSSLCNAMAIAFVIS |
| 2890 | 10941 | A | 3832 | 1289 | 3109 | ETPYVSLYAFWLFSSFAKA*VAPSGFSPT VVSSDSWLGSLVPYTLIART/PELIFVVRQ QVLDERGAAACG*FLPRLVG*VPDLDA VGLYSTAPII*GAIPGQGO*GULRMSEAQG VPAGGSLSTTVRLTWACLLPSLFTSSV *QPQCSWRAARMVSLLPFLSTFTMCSL SWICFRNFIQVQVMG*VPVTLPSNSTDSP ARTFVSSGNWMI*GGIAAFGGVLGAGFF FTVAS/PLSS*HGRKRALGPPGHLLWGLG VLGTWIIHGDLAGALRLASVILGYTLV* ASVLRQCLLDGQGQSEPSWERMMNLV VLMVFPFVSQMMVAGGSEDTWHWSSSF LPSAT*TSCSFCLKAGAVPWLSDLFSLV VPAWPLQFTSFTSLFSSLLADRFSSSG LALPMGFRVSAGLALPIGFRVSAGLALP TGFKGPEGCALLRGLLESTALAFRVSAL LLPFSAGNFFLPPTERKSGVAGFGGGTF SGTGVLVEPFLARTERKSTCWGLCTFLS SSDTVFGFTCRCLARKSICSAGISFRSS DRVFVLTFPPRRSRKSSCSTSCWRIASSV CCLVSTRLSTPRTSSPSSSSQPCPLAGQ PGLRDP |
| 2891 | 10942 | A | 3833 | 1 | 2968 | MTIVAALMTVFFIMQLVGQVPAALWVIF GEDRFRWSATMIGLSLAVFGILHALAQA FVTGPATKRFGEKQAIAGMAADALGYV LLAFATRGWMAFFIMILLASGGIGMPAL QAMLSRQPNFDHWTADRHGDLCLRGHEH MERVGMDCRRRPICLPFRVASRCMEFG HLDMNGSRRLHANGFTTPRIGANQFLRR TVNAQTNPWQNISIASAISSSTRIRISGSV GSWPRSGNAEVSALHHYVPDLHRRMLL ATL |
| 2892 | 10943 | A | 3834 | 1 | 563 | MPLRAFNPVSSFRWARGMTIVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFTVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFFIMILLASGGIGMPALQAMLSRQLT SIIGPLIVTAIYAASTWNLGAWIVGAA LYLVCLPALRRGAWSRATST |
| 2893 | 10944 | A | 3835 | 850 | 1280 | |
| 2894 | 10945 | A | 3836 | 3 | 3971 | VCTGSSSTRHIVTFDQGNFKLTGSCSYVL QNKQDLVELIHLNGACSPGARQCGMKSI EVKHSALSVELHSDMEAFRLVGHYPYS TTTACFLVKLCKVKLCLFVLKFLFLEELPT NIKVTVNGRLVSVPYVGGNMEVNVYGA IMHEVRFNHLGHIFFTPQNNFQLQLSP KTFASKTYGLCGCDENGANDFMLRDG TVTTDWKTLVQEWTVQRPGQTCQPILEE QCLVPDSSHCOVLLLLFAECHKVLAPA |

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| 2895 | 10946 | A | 3837 | 1838 | 4062 |
| | | | | | KRHKPKFKSTNPAGFFKEKINKIDRLLA RLKCKKRECNQDAIKNDKGDTTTPTEM OTTVREYYKILYVNKPNLEEMDKFLD TYTHLRLNQEELESLNKPITGSEIEAINSL PTYKSPGPDGFTAIFYQRYKEELLPFLK LFOSEIEGILPNSFYEASILPKPRGDDT KKENFRPISLMNIDANILNNLNANQIQQH KKLIIHDEVGFPIMQGWPNIRKSINLIP HVNRTKDKNHHMVISYDAEKAFFDKIQH FMLKTLNKLIGDGTLYKJIRPIFDKPTADI ILNRQKLEALPLKTGTRQCSLPLLFNI VLEVLAKAIRQEKIQLGKEEVKLSL FADDMIVYIENPIVSAQNLLKIGNFSKV SEYTINVQKSQSFYLTNNRQTESQIMSEL PFTIASKRIKYLGIQLTREVKDFPKENYK PLDEIKENTNKWKNIPWSWVGRDIVK MAILPKQMPDVNVSWDGEQKQLPFIDI SVAVATDKGLLTPHDKAAAGQIEIADS VRSNIVLQCCARPMPLRAFNPVSSFRWA RGMITVAALMTVFFIMQLVGQVPAALW VIFGEDRFRWSATMIGLSLAVFGILHALA QAFVTGPATKRFGEKQAIAGMAADALG YVLLAFATRGWMAFFMILLASGGIGMP ALQAMLSRQVDDHGGQLQGSALALTS LTHIGPLIVTAIYAAASTWNLAWVWG AALYLVCLPALRRGAWSRATST |
| 2896 | 10947 | A | 3838 | 346 | 777 |
| | | | | | GELYFQVCGQFVNRGCVVMKMKMYLLF LSGEFCRCL*YSLMVVCISVGVVISPSF FIVSI*FFSLFFHSLASSLSILLLSKNQLLD SLIF |
| 2897 | 10948 | A | 3839 | 1 | 564 |
| | | | | | MPLRAFNPVSSFRWARGMITVAALMTV FFIMQLVGQVPAALWVIFGEDRFRWSAT MIGLSLAVFGILHALAQAFVTGPATKRF GEKQAIAGMAADALGYVLLAFATRGW MAFFMILLASGGIGMPALQAMLSRQPN FDHWTADRHGDI.CRLGEHMERVGMDC RRRPIPLPRVVASRCMEPHGLDNGSRR HLANGFTTPRIGANQFLRRTVNAQTNPW QNISIASAISSSRTRRISGSVGSWFRSGNA EVSA |
| 2898 | 10949 | A | 384 | 244 | 315 |
| | | | | | NPKGQKDREAPLSRVFLKIKIKRAFAL LLHGRF*PSTPAASAPASKSPRGSGKAL ASALFYIVQLTK |
| 2899 | 10950 | A | 3840 | 3 | 1049 |
| | | | | | GSLQGCAASCARAFRLTCCARSESLAV RGTGKGAFFGENPRAAGTCSQSPPFPVAP PPGVRLWVLCPRDFTGAFLRRTLALNV RAGDEGPRRLRAPRVPSPAPLAPAP ASTPARRLPPVPMQAPGRGLGLRLMMP GRRGALREFPGGCGSCLGVALLLLLLP ACCPVRAQNDTEPIVLEKCLVVCDSPP SADGAVTSSLGISVRSKSAKAVFATRST NHEPSEMSNRTMTIYIDQVFSNGHGHDL ASSIFVAPRKGIYSFHFVVKVYNRQTIQ VSLLLNGYPVISAWAGYQDVTGEAASN GVLLLMEREDKVHLKLERGNLMGGWK YSTFSGFLVFPL |
| 2900 | 10951 | A | 3841 | 1 | 401 |
| | | | | | KGASSPVQVGPVPAASTRALLQEAQCQSG LSWVVALPOVKQEKADTQDEWTPGTAV LTPVLVPGCPSKAVDPGLPSVKQEPDP EEDKEENKDDASKLAPEEITEFSLGGP RFRDTAV*LPKSKDLKKPR |

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| 2901 | 10952 | C | 3842 | 108 | 293 | MNMACLGCFVVALIILPFSNFPAPPLKSN FLYSGSWEEKMHQLSTLSPFLPTSSRSS KYS* |
| 2902 | 10953 | A | 3843 | 1 | 1490 | MIREQKIYHKYLAQRREEKAQEKEFDR ILEEDKAKKLAEKDKELRLEKEARRQLV DEVMTCKRLQVQEKSSQYVKLLAAHPT GDRIRSKVELTRYLGPACDLTLDFKQGI LCYPAPKAHPVAVASKRKKPSRPAKTR KRQVGPQSGEVRKEAPRDETKADTDTA PASFPAPGCCENCISGIFSGDGTQRRLKT LCKDCRAQRIAFNREQRMFKQPYTNRR QNRKCGACAACLRRMDCGRCDFCDDK KFGGNSQKRQKCRWRQCLQFAMKRLLP SVWSEEDGAGSPPPYRRRKRPPSSARRH HLGPTLKPTLAIRTAQPDHTQAPTKEA GGGFVLPPTGDLVFLREGASSPVQVPG PVAASTEALLQEAQCSGLSWVVALPQV KQEKADTQDEWTPGTAVLTSPVLVPGP SKAVDPGLPSVKQEPDPDEEDKEENKDD SASKLAPEEEAGGAGTVPVNTSVDISYPE ROL*VSSWSYLHSCGTERYPGCSI |
| 2903 | 10954 | A | 3844 | 1 | 1758 | MAEDWLDPCALGPGWKRREVFRRKSGA TCGRSDTYQSPGDRIRSKVELTRYLG PACDLTLDFKQGILCYPAPKAHPVAVA SKKRRKPSRPAKTRKRQVGPQSGEVRKE APRDETKADTDAPASFPAGGCCENCIS FSGDGTQRRLKTILCKDCRAQRIAFNRE QRMFKRVGCGECAAQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCTQEDCGHCPICLRPPLGL RRQWKVCQRCLRGKHARRKGGCDK MAARRRPGAQPLPPPPPSQSEPTTEPQY T/TPAEPQVRGLCSLPTAEWMWPLR/FC CDKPKFGGNSQKRQKCRWRQCLQFAM KRLLPVWSEEDGAGSPPPYRRRKRPPSS ARRHHLGPTLKPTLAIRTAQPDHTQAPT KQEAAGGFVLPPTGDLVFLREGASSPV QVPGPVAASTEALLQAVDPGLPSVKQEP PDPEEDKEENKDDASAKLAPEEEAGGAG TPVITEIFSLGTRFRDITAVWLPSLQGRH SGREDGCKVWEITDTEPTSTSWNPRG WPGTHVSLSPPPASMMWVSCRRSWCPS SQS |
| 2904 | 10955 | A | 3845 | 1 | 1647 | |
| 2905 | 10956 | A | 3846 | 1 | 1821 | MAEDWLDPCALGPGWKRREVFRRKSGA TCGRSDTYQSPGDRIRSKVELTRYLG PACDLTLDFKQGILCYPAPKAHPVAVA SKKRRKPSRPAKTRKRQVGPQSGEVRKE APRDETKADTDAPASFPAGGCCENCIS FSGDGTQRRLKTILCKDCRAQRIAFNRE QRMFKRVGCGECAAQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR SRGCGVCRGCTQED/CLGHCPICLRP RPLRLRQWKVCQRCLRGKHARRKGG CDSKMAARRRPGAQPLPPPPPSQSEPTTE PHPRALASPPAEFTYCYVDEDELPQYTN RRQNRKCGACAACLRRNGCGRCDFCCD KPKFGGNSQKRQKCRWRQCLQFAMKR LLPSVWSEEDGAGSPPPYRRRKRPPSSAR RHHLGPTLKPTLAIRTAQPDHTQAPTKEA EAGGFVLPPTGDLVFLREGASSPVQV PGPVAASTEALLQEAQCSGLSWVVALPQ VKQEKADTQDEWTPGTAVLTSPVLVPG CPSKAVDPGLPSVKQEPDPDEEDKEENK DASAKLAPEEEAGGAGTVPVITEIFSLGG TRFRDITAVWLPRSKDLKKPGARKQ |
| 2906 | 10957 | A | 3847 | 1 | 1723 | |

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| 2907 | 10958 | A | 3848 | 1 | 1949 | MAEDWLDPCALPGWKREVRFRKSGA TCGRSDTYQSPDGRIRSKVELTRYLG PACDLTLDFKQGLCYPAKHPVAVA SKRRKKPSRPAKTRKRQVGPQSGEVKKE APRDETKADTDTPASFPAPGCCENCIGIS PSGDGTQRQLKTLCKDRAQRIAFNRE QRMFKRVGCGEACACQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCQTQEDCGHCPICLRPFRPGL RRQWKCVQRRCLRHHLRRRHQRRC QRRTPLA VAPPTGKHARRKGGCDSKMA ARRRPGAQPLPPPPPSQSEPTPEPHRAL APSPPAEFYIYCVDEDELQPYTNRRQNR KCGACAACLRMRMDCGRCDFCCDKPKFG GSNQKRQKCRWRQCLQFAMKRLPSV WSESEDGAGSPPPYRRRRKRPSSARRHHL GPTLKPTLATRTAQPDHTQAPTKEAGG GFVLPDPGH*TLCLREGASSPVQVPGP VAASTEALLQEAQCSGLSWVVALPOVK QEKADTQDEWTPGTAVLTSPLVPGCPS KAVDFPLPSVKQEPDPPEEDKEENKDDSD ASKLAPEEEAGGAGTPVITEFSLGGTRF RDTAVWLPQLQGRHSGREDGCKVWETE DTVEPTSTSWNP |
| 2908 | 10959 | A | 3849 | 2 | 1682 | LCDDTPGRGGGGGGGRGRLQEGPSE MGPRLGLEWRKIPAWLPNWLILPVASM AEDWLYCPALPGWKREVRFRKSRATC GRLNTYYQSPDGRILSKVELTRYLGPAA CDLTLDFKQGLCYPSQRPRIPLGGLPG KKRKKPSRPAKTRKRQVGPQSGEVKKE APRDETKADTDTPASFPAPGCCENCIGIS PSGDGTQRQLKTLCKDRAQRIAFNRE QRMFKRVGCGEACACQVTEDCGACSTC LLQLPHDVASGLFCKCERRRCLRIVERSR GCGVCRGCQTQEDCGHCPICLRPFRPGL RRQWKCVQRRCLRGKHARRKGGCDSK MAARRRPGAQPLPPPPPSQSEPTPEPHR ALAPSPPAEFYIYCVDEDELKRLPSVWS ESEDGAGSPPPYRRRRKRPSSARRHHLGP TLKPTLATRTAQPDHTQAPTKEAGGGF VLPPGTDLVFLREGASSPVQVPGVAA STEALLQAVDPGLPSVKQEPDPPEEDKE ENKDDSDASKLAPEEEAGGAGTPVITEFS LGGTRFRDTAVWLPRLSKDLKPGARKQ |
| 2909 | 10960 | A | 385 | 933 | 1511 | QVYRPSQTPHLALSPERVAPGLAGRL APEARAPRGSLPPIHVRSEKTRVMVFH PGARRAGGTPPAPRGDTGGAPGAPTY STPLMSLHRRLESSTGSSIFADSAPV PLAVVSLDSR*QGWESRSSHIAWTHAS SSSSSSSSSIFSRVYPRFIEFLHFDIQTG Q/RTSRQHPPR/DFRDALF*LNS |
| 2910 | 10961 | A | 3850 | 1 | 391 | SPLNKVQLINELNREVLQGVANKVSW HSEYKDSAWIFLGGPLYDLTKGDICVF SQQRSTIVAVDNFNGIKIGRTIRVDHVS NYRAPKDSEIIDVTRQLQEKGCAGARTP SPSLSESSEDEKPTKPK |
| 2911 | 10962 | A | 3851 | 1 | 135 | |
| 2912 | 10963 | A | 3852 | 18 | 238 | |
| 2913 | 10964 | A | 3853 | 254 | 1424 | |

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| 2914 | 10963 | A | 3854 | 8 | 1015 | FLSAEREPEEMNPLTKVKLINELNEREVQ LGVADKVSWHSEYKDSA/WISLGLPLPY ELTEGDIIICVFSQYGEIVNNLVRD/KKT GKSKGFCFLCYEDQORSTILAVDNFNGIKI KGRITRVDHVSYNRAPKDESIDDDVTR QLQEKSGGARPPSTLSESEDEKPTKKH KKDKK/EKKKKKKEKADREVFQAEQ SSSPRRKTVKEKDDTGPKKHSSKNSER AQKSEPREGQGLPKSRTAYSGGAE/LER ELKKEKPKHEHKSSSRREAREKTRIRD RGRSSDAHSSWYYWRS/EGRSYRSR RDKSHRHKRARRSRERE/SSNPDSRWRUI |
| 2915 | 10966 | A | 3855 | 299 | 374 | |
| 2916 | 10967 | A | 3856 | 1 | 993 | |
| 2917 | 10968 | A | 3857 | 3009 | 3583 | LFCLFFHILQPSHCWSEMVVQLSDSLTD LLDKFSNISEGLSNYSIIDKLVNIVDDLVE CVKENSSKDLKKSFKSPERLFTPEEFRI FNRSIDAFKDFVVASETSDCVVSTLSPE KGKAKNPPGSSSLHWAAMALPALFSLII GFAFGALYWKKRQPSLTRAVENIQINEE DNEISMLQEKEREFOEV |
| 2918 | 10969 | A | 3859 | 880 | 1196 | SPTTRRGTPGTCLKPTACAGAA*PGCSA RRTCASAAPLSTCPSSCAAPFPAPAAPP STPRPTSPSPWAAPASPSRRRTQTASTPA STNRAPSSCWAPTIRPLAP |
| 2919 | 10970 | A | 386 | 15 | 466 | GVPNNFIINKNTPSGWLQPLRPLW*AP VGGACHYPLGEARTEERAPCSKYTGEP EVLRIKNQGGTFRPGGGGPSAPRGSFL WST/PGSCPSITPHSLPAAR/PLPPTPRHPA PSSPCTE/SAPSGPSSQAPGITVAPGISQ VQRAAALR |
| 2920 | 10971 | A | 3860 | 305 | 631 | IEKISLEPKNRPSPQIPNLVPG/RLFLVPGD FQSQVPNPLFPKPSGHPAAGKGQPFSS LPAWRSTGPERATPGPGRPAACSALEAP SLRGPSGYSAQEPFRPRISARI |
| 2921 | 10972 | A | 3868 | 980 | 1498 | VSLINLQVLRSQLEQVTEFTTSYFKPSQ/ PPTSPIRAMKWTELRFSLCLPAGRQHLY LPATPPCSVVRGVHGKPSVPPAAPSPSTA QSHQFASHPLSSPTLFEPIKDAGTHASLF SRDRHLFPPTCHIRRPQPCLSFPHCSQGS RTGRAVTAALRMAAAAAMTGNQSPTRI |
| 2922 | 10973 | A | 3869 | 94 | 484 | AAAAAASLLLRREDPGGAGPSMAE TEALSKLREDFRMQNKS/VILGASGETG R/VLLKEILE/QGLFSKVTILGRKLTDFE EAYKNVNQEVVGGLLKSLDDYASAFQGH DVLGFC/CLGYHQEGKAGGG |
| 2923 | 10974 | A | 387 | 50 | 481 | FMEYLTLSFIHVLLQ*FIHCFVHLHFSFF YALMKSIIQ*FIHLYSCF/ICIDLLISSCIYS FIYALVKSANSLTHSPIHTFLQ*FVHLFT PLLICSFTHSSIH*PSHSLFTIQLHLFFHAL VSGFIWSFIYLFCKINVLIDK |
| 2924 | 10975 | A | 3870 | 302 | 1187 | TALVPRDKDWQSPDTLKTGICRCYFPSM AETEALSKLREDFRMQNKS/VILGATVE TGRVLLKEILEQGLFSKVTILGRKLTDFD EEAYKNVNQEVVDFEKLDDYASAFQOG HDVGECCCLGVTTRGKAGAEQFVRVDRD YVILKSAAELEKAGGCKHFNLLSSKGADK SSNFLYLQVQGEVEAKVEELKFDRIYSV FRPGVLLCDRQESRPGEWLVRKFFGSLP DSWAIRGHVSVPVTVVRAMLNNVVRPR DKQMELENKAIHGGPGGRKHGSSQGH HTGRNGFYLFNLNTHDOIG |
| 2925 | 10976 | A | 3871 | 71 | 335 | PTRSTSSGSYMKRRSGSCSP/MISDTSVV LSMDNSRSSRAVVVKIETRDGKLVSES SDVLPK*TA AAPSLPLRCRAWEGG RYAW |

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| 2926 | 10977 | A | 3872 | 35 | 450 | DIEECESMH*DDIRKITEMENEFALIKKD MDEAYKNKVELESHLEGLTEIESFLTQ YEEIRELHVFDLGHICGAVH*QQSPLGH EQHHR*GGQTVRGDRQPGQ*G*EHEIK YEEQLTLAWKHGMTRGAQRLRSR |
| 2927 | 10978 | A | 3873 | 2121 | 2371 | LENQSPRHVYSLSLKSKNDVMLL/DTAI FCPEATSEALDVVTSWASEAGTEELAFG FGLVLSYCKLSTLSVASSFVGGDWL |
| 2928 | 10979 | A | 3874 | 29 | 3977 | AEVAHARWERCFFSPTFLWGCFRDLRL PGRRACFRRAGRLKRGSYNCSQLWLCV EKALAMDRSGFGEISSPVIREAEVTRTAR KQSAQKRVLLQASQDENFGNTTPRNQVI PRTSPSFRQPTPKSRSLRLQPDISCILGT GGKSPRLTQSSGFFGNLSMVTNLDSDN WAAAFSSQRSGLFTNTEPHSITEDVTISA VMLREDDPGEAASMSMFSDFLQSLFKHS SSTVFDLVEEYENICGSOQVNLKIV |
| 2929 | 10980 | A | 3875 | 597 | 1088 | GCQRQVPSWRPPLQRAKQDMAWQLL EYQELMNIKLALDIEIATYRKLLEGEESQ LDSGMQNMHSHTKTGGYAGGLSSAYG DLTDPLGSLYSLSGSPGSGAGSSPSRTSS RAVVVKKTIETRDGKLVSESSDVLPK*TA AAAPPSLLRLCRPAWEGGRYAG |
| 2930 | 10981 | A | 3878 | 1 | 2474 | MPGYSALSNKPMLETTQMSTRGMGKL LVVRCGTEKAGPAVPGMGEPSSSTHV PLVLPLLVLALLAPARQAAAQRCPPQACI CDNSRRHVACRYQNLTEVPDAIPELTQR LDLQGNLLKVIPAAAFQGVPHLTHLDLR HCEVELVAEGAFRGLRLLLLNLASNHL RELPOEALDGLSLRRLLEGNALIELRP GTFGALGALATNLAHNALVYLPAMAF QGILLRVRWLRLSHNALSVAPEALAGLP ALRRLSLHHNELQALPGPVLQARGLAR LELGHNPITYAGEEDGLALPGLRELLLD GGALQALGPRAFAHCPRLHTLDRGNQ LDTLPLQPGQLRRLRLQGNPLWCGCQ ARPLLEWLARARVRSAGCQGPRLRG EALDALRPWDLRCPGDAQEEEEELEERA VAGPRAPPRGPPRGPGGEERAVAPCPAC VCVPESRHSSCEGCLQAVPRGPPSDTQ LLDLRRNHFPSPVRAAFPLGHLVSLHL QHCGIAELEAGALAGLRLIYLYLSDNQ LAGLSAAALEGAPRLGYLYLERNRFLQV PGAALRALPSLFSHLQDNVADRLAPGD LGRTRALRWGLHLSGNRITEVSLGALGP ARELEKLHLDRNQLREVPTGALEGLPAL LELOLSGNPLRALRDGAFQPVGRSLQHL FLNSSGLEQVGTGHLAAGLVQEAAGQHR QRAFTQQAFAASPLVPLGPGQLSLHLQK NQLRALPALPSLQLELIDLSSNPFHCDC QLLPLHRWLTGLNLRVGATCATPPNAR GQRVKAATAAFVFDPCPGWAARKAKRTP ASRPSARRTPQKRTVWTR |
| 2931 | 10982 | A | 3879 | 1 | 531 | ETPSSFPMEFEEDDLELFGGYDSFRSYN SSVGESSSYLEESAEENEDREAGEL/H DLPAAPAQPWDSSLLGWQWF*ASCLLR CVVSWVQKPPSPRPRGSAASAPGATP PTPRKPVSWLGYRENHRPKPKPKSCTRLP GLPKLEPSTLKGQDSWQMGHQDQDKTL WSWASTGGSS |

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| 2932 | 10983 | A | 388 | 119 | 1533 | KKMNLAEICDNAKKGREYALLGNYS MYYQGVMMQDSRDIQSVQRSQSK GKWPTRFGQELLAEYEQVSKVHKFK VFKIDKPSQISPVLSR*THLEIPAVWPT VPAEHRAPPQJRR/RQSRKSTSEENGRS RSPGTCRPSYSIKE*/NSLLQVGTRTIEPE GGDDKGRKNMQDGASDGMKPFQDAG YDKDLVEALERDVSRRPSIHWDIADL EEAKKLLREAGVLMVWMPDFKGIIRP WKNDSONLKGPSYRAQDDGMNIVGPL THGFSSASAAPETTRQPLLLLSLSKV KTFKGVLMVGPPGTGKTMLAKAVATEC GTTFFNVSSSTLTSKYRGESEKLVRLLFE MARFYSPTTITDEIDSICRRGTSDHEA SRRVKSSELLQMDGVGGALENDPDKM VMVLAATNFPWDIDEALRRRCFIWVG FPDVPQEKDTSVSPESCLLTDWWGL |
| 2933 | 10984 | A | 3880 | 143 | 606 | NKYTYDQCQLKKSGVDKKGKTASSLP EGSQSISREHLPAQSWLPWACLWLWPA LL/HDEMOMRKLQPLGRSRAHSARQVR W/PCREAAAGCRMROASHLSPGKPH GHFLNTRVGRAGNPHRPGKWLPLSS VYVCNTEHCLWGAWCPKPNG |
| 2934 | 10985 | A | 3881 | 253 | 514 | |
| 2935 | 10986 | A | 3882 | 950 | 1612 | IIPILASVTPQKQPAWKGTGYKGPQVS ISITEKVKSMQYDKQGIADTWQVVGTV TCKCDLEGIMPNVTSLSLPTNGSPLODIL VHPCVTSLDSAILTSSSIDAMDSAFSGP YKFPPTPLESFNLCFYTSQSVDDQPSKL LLNDGIGELMGFNWSNRSGQVGSNQY AYCMPYAADQRTWRRGAWSKYRNKN ALYTFVKRFSHLRQREKNPYP |
| 2936 | 10987 | B | 3886 | 146 | 326 | MDESAPFLCRTLGRVSDSDPGLPGCAS GPLAVPESEQKVHERKSLHWDLGLTVSL VRAQX* |
| 2937 | 10988 | A | 3887 | 575 | 828 | CYPKVGKPIKGEAGEAPAREKNFAAE KRGLIPHGRKCLPISPCTGTROPWCP/CSS SGCASADTCTPRGALGAQKPIRESNF |
| 2938 | 10989 | A | 3888 | 3 | 267 | AMVGGGGVGGGLENANPLYQRSGER PVTAGEEDEQVPSIDAREIFDLIRS*AW PLTPQAYWYPPGSSCQGCYRCFLESIT MRN |
| 2939 | 10990 | A | 3889 | 1 | 942 | |
| 2940 | 10991 | A | 389 | 293 | 805 | KARDKSPFLGDLCLKDTGQOQLQCRFF PFLGTIKSCFQNVHWSQTTSDGLSAGDG GFGPKYQ/RSRQIQPSGLNSPLNSSSDIL LPTPHFLQSQGLGSQVAQIDVKAAPPF PAEPQPKRLRSPRPLGAIESVAVSRLP SGPTGDAL*WLSQKPPTRTHGNE |
| 2941 | 10992 | A | 3890 | 3 | 470 | AMVGGGGVGGGLENANPLYQRSGER PVTAGEEDEQVPSIDAREIFDLIRCWAR ACSGGLRWGEQYRAAGGAASQGV GRGF*VGKGAESLHFPQLIRFLNDPE HSLTLEELNVVEQVRVQVSDPESTVAVA FTPTISHWSMGTLGVC |
| 2942 | 10993 | A | 3891 | 2 | 604 | ARSHRISGGGSAMVGGGGVGGGLENAN NPLYQRFGERNPVTAGEEDEQVPSIDA REVFDLIRSHQMTPEHPLTLEELNVVE QVRVQVSDPESTVAVGFPKPHSGTCR HGPPILIGLSUKVKLLRSLPSAFSRWDVA HLLPGDPLPQEHAVEQATLQKEAGWAT ALGRTHHLLLEVVMQCLSSPAPGTWAFV PLSLA |
| 2943 | 10994 | A | 3892 | 73 | 204 | |

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| 2944 | 10995 | A | 3893 | 1 | 846 | QGANMPRYAQLVVMGPAGIVKSTYCAT MVQHCEALNRSVQVNNLDPAAQHFNYS VMADIRELIEVDDVMMEDSLRFQPNGG VFCMEYFANNFDWLENCLGHVEDDYIL FDCPGQIGVYLTWPVMKQLVPALEQ WEFRVCGVFLVDSQFMVDHSRFSIGHLA AALSAMISLEIPQVNMIMTMDLSSKKA KKEIEKFLDPDMYSLLEDSTSLRKA SRKLDLKAIMWDLIGWTYSLVRI/FPD QSDSESMNVLQHHTGFAIQYQVEDLEFKR NPKEREE |
| 2945 | 10996 | A | 3896 | 1 | 1319 | MDYGLLCGQQLVPQVEPVQORGHESLV HHILLVQCSNNFNDSVLSEIGIECYHPNM PDAFLTCTETVIFAWAIGEGEFSYPPHVG SLGTPLDPHYVLLLEVHYDNPTYEVLDA EKYKYKVLASDEGLLTGHNMAVGFTW WKGIDNSGLRLFYTMDIRKYDAGVIEA GLWVSLFHTPPGMPEFQSEGHCTLECLE EALAEKPSGHIYFAVLLHAHLAQRGIRL RHFRKGKEMKLLAYDDDFNFQEPQY LKEEQTLPGDNLTTCRYNTKIDRAEMT WQGLSTRSEMCLSYLLYPRNLTRCASI PDIMEQLQFQGVKETYRFTTWFFHKS QYKNSLFMDAMNKFKWKKEGLSFK LVLSLPVNVKCSKTDNAEWSIQOMTAL PPDIERYKAEPLVCGTSSSSSLHRDFSIN LLVCLLLSCTLSATKSL |
| 2946 | 10997 | A | 3897 | 1 | 394 | |
| 2947 | 10998 | A | 3898 | 1 | 150 | |
| 2948 | 10999 | A | 3899 | 708 | 911 | |
| 2949 | 11000 | A | 39 | 132 | 370 | SNSPA*PSGEFGTMG/CRPPCPVNFILRK NGVPPCGPGPKSPDLRTHPLGPPKGRG IPGGTHCPGPPGFKKPWPPGRV |
| 2950 | 11001 | A | 390 | 2 | 428 | GLPGSTTASAAAASASASSDAPSOLF KPRLOOTSFYGRFRHFLDIIDPRTLFTYE RRLKEAVQLLEDYKHGTLRPGVTEQL WSAQKIK/SGYIPFGTPIVGLLPNQT STVFWQWLNHSHNACVNYANRNATKP SPA |
| 2951 | 11002 | A | 3900 | 1 | 1349 | MAAGQRRSSLSRLGSQFINCDPECOLSC LVGLEVQKEEVIRAAEGWKRAAPAGLR PTNYSRQASEGRVVIAGNQSYQSRASP RPLARWKASANGRAPIEFAAAVAGLG AGSGKRRRGWKMPVHSRGDKKETNHH DEMEVDYAENEGSSSEDEDTESSSVSED GDSSEMDDEDCERRRMECLDEMNSLEK QFTDLKQLYKERLSQVDAKLQEVIVIE RAPEHLEPAONLQENMQIRTKVAGIYR ELCLESVKNKYECEIQASRQHCESEKLLL YDVTQSELEEKIRRLIEDRHSIDITSELW NDELQSRKKRKPDPWPKKKPQVVSQF YTYMLQDLIDEDWTTIKNAMATLGP RVKTDPPVKLEKHLHSAISEEGRYYDG EWYIRGQITICDKKDECPSTAVITTINDE VWFKRPGSKSLYISQLQKGKYIITFI MI |
| 2952 | 11003 | A | 3901 | 38 | 383 | |
| 2953 | 11004 | A | 3902 | 252 | 526 | |

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| 2954 | 11005 | A | 3903 | 777 | 1719 | LLTLTPFRCVSAQPLPFTGTSVSWALL ALHVAUVFLFAGAAGCVATLLHDAAM NPAEVVQKRMQMYNSPYHRVTDVCRA VWQNEGAGAFYRSYPTQLDHDVPPQAI HFMDLWNSCRSTLTPKRSYNPDSHFSG LCAGAVAAAAATPLDVCKTLTNPBGVL GFELTHYRTYVQGMASAFRTYVQGVV TAYFRGVQAIRVYQIPASTAIAWSYEFF KYLHLKGQEWRAKGVLKALNESPVG QDDTDASWSHSLSPGMLPPQVELKGKE KGLSPTDFGLVTLTSSCQPLLPPLPGP KHVQSTPQHL |
| 2955 | 11006 | A | 3904 | 1 | 1788 | MLQQGAILEAETKPSDPTYSLALINFP ASTADLGTKRPAVEEKEIPNKTQASL FLAKERRQDPFRPLSALPLVKMAAIG GAAHSEGRRLPCRPRPFTSRPPRSLDA LQVORDQSDGAALFQQLQGRAGLSER PCQTERGKPKQQLSNRLQAFRRGPL GSGFQLKWSRCGCVNAARSPPGSAQR SRSEPLLGPRWFGSGRWQLCESLKKJA KGWVSQDPSRQLEKCGQASSTSPRTY SQDLLQHPKLEVAAADPRTRGTREPAAL VERLEMSAGAGSVVDVAPLLVVRRRR RRRRLISAQALAAAAAAASEPLDCQM RLCASLGVSTAFSSACRADITDCVSGL AGGEMVPRRVLAADQLEEQAEFKEAPS LFDKDGQDGTITTKELGTVMRSLGQTQ EGELQDMINEVYADGNGTIDFPVFLIM MARKMKDIDSEEHRESFRVFAKDNGM YISAELRHVMITNLGEKTDNLEVDEMI READIDGDGQVNYEEFVQMMITGKMED LTPQLPSPPLEESNWNLLTLQKKEKK KKVHLHFSCLYSKTECQKYLHVHTHQ NLHLVGGPVP |
| 2956 | 11007 | A | 3905 | 1 | 351 | GPFRPTPLLPKIRGATARPFRSRF*PRS DIPPLSRVLVARRPSPLGKPLWIMGRP RPPIAFLARAPMGRPNRAWMLLPRRCF KLFEGNRRQCSSRGCHHSGRRAGDRP NLS |
| 2957 | 11008 | A | 3906 | 3 | 345 | SCRCRRKAGGRPEQTDPRTRQPTSNN ELSSHTTAYASNQPPILTRAPPSTQVRP VPGPPAGAVVAVPGGALASVSFDSRDSK TAAQSSSEVGALPPHQDVTICAVRAAT |
| 2958 | 11009 | A | 3907 | 3 | 387 | RPLQTKGRKQAGFRSPARPEPWQWQ PREEH/VASVSFDSRDSKMAAQAAPKVV LKSTTKMSLNERFTNMLKNKQPTPVNIR ASMQQOQQLASARNRRLAQOMENRPSV QAALKLKQKSLKORLGKSN |
| 2959 | 11010 | A | 3908 | 565 | 719 | GRDVTPRSKPAPRWTSRSSPNGLKKRW CSRSWRSWERGPRA*SSALGKSNQIARL/ WPTHIRGPQGSNRRTPTPYREALPRE GLRGRATENPT*GRDVTPRSKPAPRW SRSSPNGLKKRWCSRSWRSWERGPRAW SYGSWRNRW |
| 2960 | 11011 | A | 3909 | 299 | 557 | ADGSADLDSORSSNELSSHTTAYASNQ/ LHILANPSPSTSQLRFRPVAVAVPGAVG GSPREHILASVSFDSRDSKMAAQSSEK LC |
| 2961 | 11012 | A | 391 | 3 | 297 | |
| 2962 | 11013 | A | 3910 | 1 | 420 | |
| 2963 | 11014 | A | 3911 | 2 | 437 | |
| 2964 | 11015 | A | 3912 | 10 | 250 | |
| 2965 | 11016 | A | 3913 | 2824 | 3156 | SNEGVKGLSRQKAWTADYNFLGNGNH FSGFYFSDSCYSSVRRCTCCDFCNSG RNCSGFWFLCCTILCSD*SSFLISRSTW TPGLAIHPIRRLIT*LLISWSTV |
| 2966 | 11017 | A | 3914 | 1 | 70 | |
| 2967 | 11018 | A | 3915 | 42 | 140 | |

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|------|-------|---|------|------|------|---|
| 2968 | 11019 | A | 3916 | 4594 | 4848 | HIYCE*SLYLFRE*DLDDGDLLECELAR LRDLVYDLE |
| 2969 | 11020 | B | 3917 | 565 | 1161 | MYHGWVPLDHIHAEDTLFPYLGKDD VTYAIKPTCWPLGDIIPSCALAHRIETELM GKPFDEGLKPTDPIHMLRLAIETVAHDYD VVIDSAPNLIHGITINVVCAADVLIPTPA ELFDYTSALQFFDMLRDLKNDVLKGFE PDVRILLTKYSNSNGSQSPWMEEQIRDA WGSMLVKNVVRETDEVGKDLHALLVR I.* |
| 2970 | 11021 | A | 3918 | 3 | 226 | LSVLFCFCFVSNFNFFVYVSCCVFMATS QTDIFCMHTYSLEIMIVIHYNLEFF*ISKM ATIAVLGFLRLDIYHV |
| 2971 | 11022 | A | 3919 | 1469 | 2806 | CGSPPFATSSFFALS GHVLF AKLCTMVAP KLRSWMYAVYGA LAVMGTMPGWYLL LLGHCVGLYVASLLGQWVCLGLGLAS LASFKMDPLISWQSGFVTGTFDLQEVLF HGGSSFTVLRCTSFALSCAIPDRHYSL ADLLKYNFYLPFFFGPIMTFDRFHAQVS QVEPVRREGELWHIRQAQGLSVVAIMA VDIFFHFFYLITIPSDLK FANRLPDSALAG LAYSNLVYDWWKAAVLF GVVNTVACL DHLDPQPCKCITALYVFAETHFDRGIND WLCKYVYNHIGGEHSAVIPELAATVAT FAINTLWLGPCDIVLWSFLNCFGPQTL KLWVVPK TGQKWGPCKHEIEGLLCQVQ MSRRVRLFGAHELSPHIMYNLVSLN SLKFTLVARRLLLTGFPQTLSLFTY CGVQLVKERERTLLEEEQKQDKKPE |
| 2972 | 11023 | A | 392 | 1 | 885 | |
| 2973 | 11024 | B | 3920 | 54 | 316 | TIWDGEETVYCFKERSRAALKACYRGN RYPTPDEKRLRLATLGLSLTQVSNWFKN RRQRDRTGAGGGAPCKRKLPPQGPCVW QPHRDG* |
| 2974 | 11025 | A | 3921 | 1 | 2219 | MATLPAEPSAGPAAGGEAVAAAAATEE EEEEARQLLQTLQAAEGEAAAAAGAGA GAAAAGAEGPSGPGVGPSPPEASEPPT GLRFSPEQVACVCEAILQAGHAGRLSR FLGALPPAERLRGSDPVLRLARALVAFQR GEYAEYLRLLESRPFAAHHAFLQDLYL RARYHEAERARGRALGAVDKYRLRKKF PLPKTIWDGEETVYCFKERSRAALKACY RGNRYPTPDEKRLRLATLGLSLTQVSNW FKNRRQRDRTGAGGGAPCKSES DGNP TEDESSRSPEDLERGAAPVSAEAAAQGS FLAGTGPPACPASSILVNGSFLAASGSP AVLLNGGPVINGLALGEASSLGPLLITG GGGAPPQPSPQGASETKSLVLDPTG EVRLEEAQSEAPETKGAQVAAAPGALGE EVLGPLAQVVPGPPTAATFLPPGPVFAV AAPQVVP.LSPPGYPTGLSFTSPLNLPO VVPTSQVVTLPQAVGPLQLLAAGGSPV KVAAAAGPANVILINSGVGVTALQLPS ATAPGNELLANPVSGSPIVTGVALQGGKI ILTAITPSTMLVSQVLPAPGLALPLKPE TAISVPEGGLPVAPSPALPEAHALGTLSA QQPPAAAATTSSTSLPFSDFSGLLFNFA PFPEGLMLSPAAPVWWSAGLELSAGTEG LLEAFKGLGTQAPHITVLRIPDPDPGELL LGATAGGEVDEGLEAEAKVLTQLQSWP VEEPFL |
| 2975 | 11026 | A | 3922 | 185 | 478 | VSDTLWALAGLAAGRWAGGCQTLGLQ GVVQGLGLLINGPRAGAAPLSLGNLHPP SAARWHPS*AASTGTGQSLVGIVEPHN PTSSGG*RPGTAGRSQ |

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| 2976 | 11027 | A | 3923 | 74 | 593 | RGWVMWVDEFQPALVLSFYERQLNLDA SVQHLEDGDGKRKRSSSSPSINKKAKA LDNSLQPKSLAASSPPPCSQSPQCEEPK QGVKPHEGPRGPLSASGVPGQPWPQG GG/WWGAAGRVAEPRTESREPVSGAGT SSRSPT/GFRQPPHPSARSPRAAPGQR GWAGDRR |
| 2977 | 11028 | A | 3927 | 1 | 2936 | MALMFTGHLLFLALLMFASTFEESVSN YSEWAVFTDDIDQFKTKQVDFRPNQK LKKSMHPSLYFDAGEIQAMRQKRASH LHLFAIRSAVTVMLSNPTYLYLPPPKHA DFAAKWNEIYGNLPLALYLCLCPEDK VAFEFVLEYMDRMVGYKDWLVENAPG DEVPIGHSLTGFATAFDLYNLNDHRR QKYLEKIWWITEEMYEYKSVRSWGKQL LHNHQATNMIALLTGALVTGVDKGSKA NIWKQAVV |
| 2978 | 11029 | A | 3928 | 2 | 512 | |
| 2979 | 11030 | A | 3929 | 1 | 399 | |
| 2980 | 11031 | A | 393 | 2 | 674 | SCPLSCTSAATGLWVKEGLRIVSSVLLGL SCPWGSPLAEALDLGEG/RLWRTSYGR FRHFLDIIDPRTLFVTERRLREAVQLLED YKHGTLRPGVTNEQL*SAQKISQAIYHP DTNEKJFMPFRMSGYIPFGTPIVGLLLP NQTLASTVFWQWLNQSHNACVNYANR NATKPSASKFIQGYLGAVISAVIAVGL NLVLQKANKFTPATRLIQRVFPFPAV |
| 2981 | 11032 | A | 3930 | 1 | 1812 | NRRTRPGCGVTVCYRREFIQRLKLEAAL NVHDGCVNTICWNDTGEYILSGSDTKL VISNPYSRKVLITIRSGHRANIFSAKFLPC TNDKQIVSCSGDGVIFYTNVEQDAETN RQCQFCHYGTITYEIMTVPNDPYTLSC GEDGTVRWFDTRIKTSCTKEDCKDDHIN CRRATSVAICPPPIYYLAVGCSDDSSVRI YDR/MLGHKELQGNVAGRGTTIGLPL RFISLPHLNNKSCRVTSLCYSEDGQELV SYSSDYIYLFDPKDDTARELKTPSAEER REELRQPPVKRLRLRGDWSDTGPRARPE SERERDGEPESPMCPMLQRMSSDMLSR WFEEASEV AQSNRGRGRSRPRGTSQSD ISTLPTVPSPDLEVSETAMEVDTPAEQF LQPSSTSMQAHAHSTSSPKESPHSYSFC YFLPDSUDQORSVEASGHHTHHQSEFLR GPEIALLRKRLQQLRLKKAEOQRQOELA AHTQQPSTSDQSSEHGSSQDPHASDPS SVVNNKQLGMSMLDQDDNNNEKLSPKP GTGEPVLSLHYSTEGTTSTIKLNFDEW SSIASSRGIGSHICKSEGQEEFVPQSSVQ PPEGDS |
| 2982 | 11033 | A | 3931 | 1 | 1878 | |
| 2983 | 11034 | A | 3932 | 2 | 202 | |
| 2984 | 11035 | A | 3933 | 9 | 111 | SRQAWHEASNYGPMKSGNFGGT/RNMG GPYGGGNL |
| 2985 | 11036 | A | 3934 | 297 | 611 | QWCLRFMNGVLSGGLSVQTASPPSASR RHFPPLGVGDGELSHGGRCAGVKVGR GGNSYSLKARCFCPGHGVSSASVSAGS RSS*ARLRSFSPSLTGTGFGGR |

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| 2986 | 11037 | A | 3935 | 14 | 1276 | KSGGTALAAVAAAPGPVRRCSSQSCFSS SGSSHIYSARTSPVRVRPRRSLSSRAAGN RAEATESAMEKTLTETVPLERKKREKEQF RKLFIGGLSFETTEESLRNYYEQWGKLT DCVVMRDIASKRSRGFCFTVFSIHGLE VDAAIASRPHSINGEVVEQKRAVAREE SGKPGAHVTVKKLFGVGKEDTEEHHLR DYFEEYGKIDTIEITDRQSGKKRGFGFVT FDDHDPVDKIVLQKYHTINGHNAEVRK ALSRQEMQEVQSSRSRGGNFGFGDSR GGGGNFGPGSGNFRGGSDGYSGRGFG GDGYNFGGGPGGGNFGGSPGYGGGR GGYGGGGPGYGNQGGGGYGGGYDNYGG GNYGSGNYNDFGNYNQOPSNYGPMS GNFGGSRNMGPGYGGGNYGPGGSGGSG GYGGRSRY |
| 2987 | 11038 | A | 3936 | 827 | 2064 | QQRVFCGAPRRVSRAAAVLTAPG RVRFVYRGDLSHLARLEIGLKRSLSPR WREKKQFRKLFIGGLSFETTEESLRNY YEQWGKLTDCVVMRDPASKRSRGFGFV TSSMAFVDAAMAARPHSIDGRVVEPK RAVAREESGKPGAHVTVKKLLVGKIGE DTEEHHLRDYFEEYGKIDTIEITDRQSG KKRGFGFVTFDDHDPVDKLDLRKYHTI NGHNAEVRKALSRQEMQEVQSSRSRGG GNFGFGDSRGGGNGFGPGSGNFRGGSD GYGSGRGFGDGYNGYGGPGGGNFGGS PGYGGRGYGGGGPGYGNQGGGGYGG GYDNYGGGNYGSGNYNDFGNYNQGGGS SVGPMKSGNFGCWUNMGPGYGGGNY GPGGSGGSGGYGGRSPILKLPICHGAS LV |
| 2988 | 11039 | A | 3937 | 36 | 320 | GPORWVVVDEVIMWLEBQYPVSFLKQ PFEIGRHLDLPKGTGYICVNMFCGPNKSC/ PROKRCQSGNGCHVCKVVPETSKSQPLR CSQGMTHWSSL |
| 2989 | 11040 | A | 3938 | 3 | 713 | |
| 2990 | 11041 | A | 3939 | 1 | 519 | |
| 2991 | 11042 | A | 394 | 485 | 1044 | HLVPLCPNLKAGRCTVQERLLVJCCS RSWRWRNLM*RWLNYAPVSSGHRH*SS LARETSVDPDMRKGPAGAEGKGKAVGC KGVSQETAEAYWKRTSSSLEPTWLLTN KPMFFGFRNLFAPTRHTPEALWLPFC HRGSPALHIEAFMPAALPSGTASCELPGH WPYQLSGVLCCAPVWKEA |
| 2992 | 11043 | A | 3940 | 1 | 966 | MGHHLMDIKLVALGGLYIAIQRHYATK CSVLKNDQILVIGLFMIQNVYRKHFANP LSALFIQQGIEFAAIAEHITVAERNHA ITQIRLEAQTFIDSLKEWHNAIRKSLDYE ALQAFEFVRGATDRGFPALSSALVRVL VLDANDNSPFVLYPLQNGSAPCTELVPR AAEPGYLVTKVVAVDGDGSGQNAWLSY QLLKATEPGLFGVWAHNGEVRTARLLS ERDVAKHRLVVLVKDNGEPPRSATATL QVLLVDGFSQPYLPLPRAAPQAQADSL TVYLVVALASVSSLFLSVLLFVAVRLLC RRSRAAPVGRCSVL |
| 2993 | 11044 | A | 3941 | 1 | 2783 | RJISVDDFVEINVSLSVAEAGIYGRDL DSNMKKLGRHPNRQVLAHILMVFLSQV RIEPIRYSVLFETESGSFVAHLAKDLGLG JGELASRSARVLSDDDKQRLQDRQTGD LILREKLDREELCGPIPCVLHLQVVLE MPVOFFQGELLQDINDHSPFFEREVLL KILENSQPGTFLPLIAEDLDVGSNGLOK YTISPNSHIFILTRNHSEGGKYPDVLQDK PLDREOFPEFSITLVALDGGSPPRSST NRITPTSARINLSLVSAINNGSMTEEDIN RTVISGTPRONSIKMTDKIRTIWIERRPG VVVLTICLIMV*HLTSAIANRNLRLKLG |

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| | | | | | | RMVIFSHRLKVVSMKSA |
| 2995 | 11046 | A | 3943 | 1887 | 3072 | NFVMCHGEPWLAGRTVPVSTLSGPPEL ALQKLGKTPLGRLFTSSTLTRDFIEGR DAGLWGRSRRLRLSGPKLLTELFPYRRH RCTKRKKICDCISANVWAVLKTVEAAGS DRPVQCLTITAVQRRERDTQSLSVITAELE PVSSPHFIREAGQYGTGRSSKEREVPQV QRSFSNWIRNNGCDICELSPTSGDHPPPS GPGLYSARKAIMQHYQARGMRDVTVED IYIGNGVSELIVQAMQALLNSGDEMILVP APDYPWTAAVSLSSGKAVHYLCDESS DWFPDLDIRAKITPTRGIVINPNPNTG AVYSKELMEIVEIARQHNLIFADEIYD KILYDDAEHHISIAPLAPDLLTTTFNGLSKT YRVAGFRQGMVMVHRFFTPRLTVQAI |
| 2996 | 11047 | A | 3944 | 623 | 2587 | SPRKGGGKGGKANRVLLTGAPLDPIDLS QSAVSHSVKLEENHTGVRLLDRITREV VLTDAGQQLALRLERLLD/ELNSILRDT GRMGQQLSGKVRVAASQTISAHLIPQCI AESHRYPDIQFVLHDPQQWVMSIRQ GDVDFGIVIDPGVPGDLQCEALSEPFFLL CHRDSALAVEDYVPWQALQGAKLVLQ DYASGSRPLIDAALARNGIQANIVQEIGH PATLFPMAAGIGISILPALALPLPEGSPL VVKRITPVVERQLMLVRRKNRSLSTAAE ALWDVCNCAIQPFPTAITRCIGSVTVKL LVPVGKSEFLAAQHKVVTCNPAGDIAV VASVIGLICITLSKERPEPTAAGEIVADT VQEHIVVEIHAIIRTVGAIRMQVEIKSGV TQAYLQLGINEKLGSGRPDRPICGLGTS KIYRILGKTVVCYPIFDLSDFYMSQDVF LLIDDIKNAQFIKQYWKMHGRPLFLVLI REDNIRGSRFNPILDMALAAKKGIGGVK VHVDRLOQPLENDLIVVHVALIAESQRLQ VFLNTYGIQTQTPQQVEPIQIWPQQELVK VTLGAFGHEEEVISNPLSPRVQNIITYKCK NTHDEREAVIQOELVIHIGWISNPNELFS GMLKIRIGLQNECSLVIQVSTHPIAT |
| 2997 | 11048 | A | 3945 | 102 | 2392 | RKQMNYSLKQLKVFTVVAQEKSFRRAG ERIGLSQSAVSHSVKLEENHTGVRLLDR TTRAVVLTDAQQLALRLERLLDELNST LRDTGRMGQQLSGKVRVAASQTISAHLI PQCIAESHRYPNIQFVLHDPQQWVME SIRQGDVDFGIVIDPGVPGDLQCEALSEP FFLLCHRDSALAVEDYVPWQALQGAKL VLQDYASGSRPLIDAALARNGIQANIVQ EIGHPATLFPMAAGIGISILPALALPLPE GSPLVVKRITPVVERQLMLVDRFAQK FQIGDRKILRSNNANVNLPAATCGFPFP VCCWRFAYGCCSALLRPPRLYSVFHISL LYGFSRAIHISPGACWVFIHERFGQFMY GLYPHQWRINLALLIGLVSIAPMFWKI LPHRGRYIAAWAVIPLIVWWLMYGGF FALERVETRQWGGTLTLIIASVGIAGAL PWGILLALGRSHMPIVRILSVIFIEWRG VPLITVLFMSSVMLPLFMAEGTSIDKLIR ALVGVLFSQSAVVAEYVRGGQLQALPKG QYEAESLALGYWKTQGLVILPQALKLE TVRQPQTLAMEEINCHHNYVQKEQHFQ EEIYVTRKGAVSARAGQYGHIPGSMGAK SFIVRGLGNEESFCSCSHGAGRVMSTRK AKKLFVSEDQIRATAHVECRKDAEVIDEI PMAYKDIDAVMAAQSDLVEVIYTLRQV HISCRAGETGAVAPASDRGKGDDGNLRS NRGRRGAGVAASAI.PARHRRARGRLPLC YR |
| 2998 | 11049 | A | 3946 | 2 | 331 | |

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|------|-------|---|------|-----|------|--|
| 2999 | 11050 | A | 3947 | 3 | 116 | |
| 3000 | 11051 | A | 3948 | 3 | 162 | |
| 3001 | 11052 | A | 3949 | 181 | 804 | RPLPRIGCCPGAGQVGEARSVRSLCF APCRLLRAGGGRALRRRPGTGPVARP SYSSFTQGD5WGEVDEEEDQVVAR DLRAEPIGMMQWSEPRKLSVLPDRNGS PVLFDKRNIGFFSGRGQQEPLRRWPFQ VLSILCSLLFAILLALAIAYLIVKELHA ENLKNEDDVTGLLGFWTLIISLTAGIL LLQLFLGQ |
| 3002 | 11053 | A | 395 | 901 | 1213 | SQHFGRPRWADHLRSGV*DQPGHIDET PSILKIQLLAGYSGEHL*SQLLRRLRHN CLNPGSGGCSEPLRHCTPAWVAEPDS VGGGVGGKEKNNTSNMLQTRP |
| 3003 | 11054 | A | 3950 | 1 | 149 | |
| 3004 | 11055 | A | 3951 | 1 | 1896 | |
| 3005 | 11056 | A | 3952 | 3 | 275 | |
| 3006 | 11057 | A | 3953 | 2 | 395 | |
| 3007 | 11058 | A | 3954 | 1 | 209 | |
| 3008 | 11059 | A | 3955 | 466 | 3315 | EMVPRWAIYQGFQDCLVHASSRASGL WKLLNPCRGLRCPDTRLPTSRWPNRDR SASTQLLGKQSLPPAPEADPVFLPOEENE PPSPFLVGIHYNMPLTSTYLIKQMKLRV MNSQEQAQSGSPTPIQTERHTAQLLLTAD QTLVI.PATQHYVVLKFPFGAEDIMSG GPITLEAAEFDDLIGKCLPDRPIAGSVRLG DRIWNPGRGSPRRRCRLHGQCVPGSLER RPRDYPTILQLWLARRQDFARCGLAHN DR |
| 3009 | 11060 | A | 3956 | 11 | 755 | ETHAPPSGVWGLERFSPHADQEIAGQG QTAPAEWKPHSHPTPKSCGDQTKTLHT ERREDKPSFTRAGWGWENLKGPPVTEG AGSPGGSSHGAGLNRDHPLQSQPGRRAI PWPQORAPTHMLFSMTRGQSPGAAPGAQ PEISKLAGYKKQKQKRSCLRKKCHP/QE AGHRQVVAHSAGPGLQGEAAAGEGRGEG AFWLKARNKSYSSLGINIPPNGAQQSC LGKVGCRRHDPHRSGLSAPFPEPMSQAL |
| 3010 | 11061 | A | 3957 | 175 | 559 | VKRQLRRLRRSPWPDEKPKEGVKTENN DHINLKVAGQDGSVEQFKIKRHTPI.SKL MKAYCEURQGLSMKQIKIPDFDQQPINE TDTPATV.GKWDERYQLMVFQARPG GVYLRKELCFLYSQNSVSF |
| 3011 | 11062 | A | 3958 | 140 | 380 | |
| 3012 | 11063 | A | 3959 | 98 | 426 | LLTPSSAALKGESQWHLREAGQSLPR RLTCAGWNKRFLHWIDQLSG*IQTCLLL VVFVWATE*LGESLPL*APIGGTQPW*F LIGAMKKHQGTGENDHFNPSPGSH |
| 3013 | 11064 | A | 396 | 110 | 1012 | KTRRGYTLHCAAAWGRLETLKALVEL DVDIEALNFRREERARDVAARYSQTECVE FLDWAGLNPGTATHDSDEEAFLTRVW STGHND5GVKQRMGQKEIQNATSSNH TCPSSITLQRKKGV*FVGLLW*FRNVSTL LMKFTLPQARNSPPEPSGTITITQTKIC RMFYWSYMESEGGPESERAFFSQQEE NEEEEAQEPETGPKNPPLLQPALTDGVE GLQKIFEDPENPHHEQAMQLLEEDIVG RNLLYAACMAGQSDVIRALAKYGVNLN EKTRRGDTLLHCAAAWGRLETL |

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| 3014 | 11065 | A | 3960 | 234 | 1050 | ARTLKRRWKVRKTVIGRKVQTMKILETL RISALLWEEVLLGLKDKEGYTSFWND CISGIRGGIILIELAMRGRVLEPRTMRK KRLLDRRLVLLKSDSPTGDVYWDETLKH IKATEPTETVQTWIELLTGETWNPFKLQY QLRNVREIRIAKNLVEKGILITEQNLLF DMTTHPVNTTEKQRLVKKLQDSVLER WVNDPORMDKRTLALLVLAHSSDVLEN VFSSLTDKQYDVAMNRAKDLVELDPEV EGTKPSATEMIWAVLAAFNKS |
| 3015 | 11066 | A | 3961 | 1 | 1074 | MEPIGARISLEAPGPAPFREAPPAAELPA PVVPCVQGGDGGGASETSPDAQIGD RPLSPKEE/CRPPGAGGAAGMPPLPRAL LFLARRPHL/VRRPSSCSSNRWRHWA A/SGAEDAQLGPGGCCAKCKKRVQFAD TLGLSLASVKHFSEAEPOVPPAVLSRLR SFPMAEDLEQLGGLLAAAAVAAPLSAP PSRLRPLFQLPGPSAAERLQQRQVCLER VQCSTASGAEVKSGSRVLSCTPGRAVTV RYTTFEWRSLDVPaelQPELEPQOQPEA PSGASEFGSGDAKKEPGAECFHSLCLPP GLQPEDEEDADERGVAVHFVAVCYRCAQ GEYWDNNAGANYTLRYARPADAL |
| 3016 | 11067 | A | 3962 | 42 | 424 | |
| 3017 | 11068 | A | 3963 | 3 | 899 | PPNVFSPASLPFFPAEGGPGRSRWREGG YLSQSRSGRLSQEEAASRSAGGMAGAPD ERRRGPAAGEQLQQQHVSCQVPERLA QGNPOQGFSSFFTSNQKQCLRLKLTLET NPYVKLLLDAMKHSACAANKDRHFSC DCNGNVSGGFDASTSQIVLQCNHINQA HMNRVVTHELIAHAFDHCRAHVDWFTNI RHLACSEVRAANLSGDCSLVNEIFRVQ FGLKHPPQTCVDRATLSILAVRNSISKE VAKKAVDEVFESCFNDHEPFGRIPIHNT YARYAHRDFENRGRVYYSNI |
| 3018 | 11069 | C | 3964 | 165 | 347 | |
| 3019 | 11070 | A | 3965 | 871 | 1194 | EFVFFFETESFVTQLECSGHNGLHCHN LHLPQSSNAPASASRVARITGAHHHARLI FVFLVEMGFHTGWAMLVLKLPDIQVIC PPWPPQAGIYRHEPHQPHGRK |
| 3020 | 11071 | C | 3966 | 54 | 197 | MVLSSFNFOKAIKLALLKYFKISQLPFP YVHKIGCRHSHFAMNV** |
| 3021 | 11072 | A | 3967 | 263 | 742 | SRSHDHLVTVYVPSWNFRALRISNSK NEMFSMSPLREMKKKKLPSDSGDLEAL EGDKKEKSTVHIETHQNTSKNVAQVP MKRGQSKMKMKMKEY*QDEEDREL IMKLLGSAGSNKEEKGGKGGKTKDE PVKKOPQKPRGGQRVSDNIKE |
| 3022 | 11073 | A | 3968 | 189 | 1393 | SHTDFPYDNTDGGDTSDDEKKEEHTP VEVELMTQVDQEDITLQSGRDELNEELI QEESSEDEGEYEEV/REKQDQSGEMKD EGEETLNYPDVTYIDL.SHLAQPSIQKLA SKEESSNSSDSKSQRRLHSAKERREMK KKKLPSDSGDLEALGDKKEKSTVHIE THQNTSKNVAQVPMKRGQSKMKMKM KEK YKDQDEEDRELIMKLLGSAGSNKEE KGGKGGKGTKDEPVKKOPQKPRGGQ RVSDNIKEITPFLVITHELQDFCAVDD P/HLIDQKGPEPLDQQGENENLFDSDQ GQPHPEDVLLGFAIPICAPYTIMTNYKY KVKLTPGVQKKGKAATAKALNSFMHSKE ATAREKDLFRSVKDTDLSRNPBGVKS CTQSSERKKEIAEMKF |
| 3023 | 11074 | A | 3969 | 192 | 1510 | |
| 3024 | 11075 | A | 397 | 247 | 496 | |
| 3025 | 11076 | A | 3970 | 68 | 382 | MSVPDEEERLLRLTORWPRASKFLLSGC AATVAELGTRLPTPPGPGVARAALGEE TAGAASRPGSAQSKRSPSHARIAEVAV |

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| | | | | | | EARPRGRRRDLEVSTAFSF |
| 3026 | 11077 | A | 3971 | 3 | 1451 | GAVRTWGRGFQTEKQASLLNFWNPPT TAQVTIEAEPKVSXGKDVLVHNLPO NLAGYIWYKGQMKDLHYHTYSYVVDGQ IIYGPAYSGRETVYSNASLLIQNVTFREDA GSYTLHIKRGDGTGRGETGHFTFLYRH SLDSALSLEVTGSSQPL*DTWENCPTLW LHCLMTELTSLGDSVLPVCVISAEPSPRS GFPVSKGFKDNWKFHHPSLGCPWQKGL QRKHTSGGKVRCLKRRFQHCMLQVTRT SVETPKPSISSNLYPREDMEAVSLTCDPE TPDASYLWWMNGQSLPMTHSLQLSKNK RTLFLFGVTKYTAGPYECEIRNPVSASRS DPVTLLNLLPKLPKYPTITNINLPRENKDV LAFTCEPKSENYTYIWWLNGQSLPVSPR VKRPIENRILILPSVTRNETGPYQCEIQDR YGGIRSYPVTLNVLYTTKHSGLYACSVR NSATGMESSKSMITVKVSAPSGTGHLPGL NPL |
| 3027 | 11078 | A | 3972 | 1 | 1008 | |
| 3028 | 11079 | A | 3973 | 3 | 1374 | |
| 3029 | 11080 | A | 3974 | 1 | 1854 | |
| 3030 | 11081 | A | 3975 | 1 | 1319 | |
| 3031 | 11082 | A | 3976 | 1 | 2247 | |
| 3032 | 11083 | A | 3977 | 1 | 1993 | |
| 3033 | 11084 | A | 3978 | 1 | 1006 | |
| 3034 | 11085 | A | 3979 | 3 | 1095 | AQLTAVLRKFLDPRLISTEENTQAAETM GPLSAPPCTEHIKWKGLLVTSALLNFWN LPITTAQVTIEAQPCKVSEKGDVLLVHN LPQNLGTGIWYKQIRDLYHYHTYSYVVD GQIIYGPAYSGRETAYSNASLLIQNVTFRE DAGSYTLHIKRGDGTGRGVTYFTFLYL ETPKPSISSNLYPREAMETVILTCDETP DTSYQWWMNGQSLPMTHRFQSLSETNRT LFLFGVTKYTAGPYECEIWE/SASRS PVTLESP/RMGPDLPRIFFSSPLNYFRER NLGFVPGLGDF*TPPAQYSWTNKGKFL SGQKLFIPQITPKHNGLYACSARNATGE ESSTSLTIRVIAPPGLGTFCQ |
| 3035 | 11086 | A | 398 | 653 | 1139 | RPFFPHSESONPPRQ/PDSSTGTST*PA DTHCPRPVSAQGGTAEG*PRVHGPS PLPHSIGSAPPQCEGAPAGEWAREPGE DGV/PGAPQON*GKMEFSAG/GQVPSR VVEGVQSHLRSEGPFPACPAVPCAAEGP DGRPGNTGRGGPGLNRQRWEEW |
| 3036 | 11087 | A | 3980 | 3 | 1442 | IRADPAHELENCSCPGKRLSTERGRTAQ LTAVLREFLDPRLISTEENTQAAETMGTL SAPPCTQRIKWKGLLLTASLLNFWNLPT TAQVTIEAOPKPVSEKGDVLLVHNLPO NLGTGIWYKQMRDLYHYHTYSYVVDGEI IIYGPAYSGRETAYSNASLLIQNVTFREDA GSYTLHIKGDGTGRGVTRGRTFLHLET PKPSISSNLYPRETMEAVSLTCDPEP ASYLWWMNGQSLPMTHSLKLSSETNRTL FLLVTKYQLDPIECEIRNPVSASRS VHFGISCPKLPKYPTITNINLPRENKDV NFTCEPKSENYTYIWWLNGQSLPVSPR KRPIENRILILPSVTRNETGPYQCEIRDY GGVRSDDPVTNLVLYGPDLPRIYPSFTY RSGEVLYLSCADSNNPAQYSWTNEKF QLPGQKLFIRHITTKHSGLYCVSVRNSAT GKESKSMITVEVSGKVDPKHRWQ |

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| 3037 | 11088 | A | 3981 | 79 | 1565 | EASLLEDDGDMVYRLPLTSHQVYRTAQL RAMLRKFLDPRLSSTEENTQAAETMGPL SAPPCTQRTITWKGLLLTASLLNFWNPPPT AOVTIEAEPKTVSKGKDVLLLVHNLQON LAGYTWYKQGMKDLHYHYITSYVVDGQII IYGPAYSGRETVYSNASLLIQNVTREDA GSYTLHIWKRGDGTGRGETGHIFITLYLE TPKPSISSNNLYPREDMEAVSLTCDPETP DASYLWWMNGQSLPMTHSLQLSKNKR TLFLGVTKYTAGPYECEIRNPVYSARSRD PVTLLNLLPKLPKYITINNLNPRENKDVL AFTCEPKSEMYTYIWWLNGQSLPGSVP RVKRPVENRVLIPTPCSRGIETGPYAQCEI VRDLWVGIRSLPSSPWNVPLMGPDLPRI YYPYFTYLPFQGGKPSDLWSLSRES*PIH AGVFFWQGFNGGSFSGIQGKLFIPQITT KHSGLYACSVRNSATGMESKSMYVKV SAPSGTGHLPLGLNPL |
| 3038 | 11089 | A | 3982 | 1 | 2045 | MLEAAVHARGNSDVTTRTCATQVLKPL VSYGQAETGFSVPQLKYPPWDGLLHRDI PPGTLPVEHSPCSLAALQFLNATSTHGECE SAFARRKLESSFSQHSQJQEGHRHGSRLSP SGAPVKDSGSRTPAGSRGGQOHPSQLLL CGRDDLFOASSGHGPFLLLPPLPSPRDA LQLLREASKFPTDKRQGRSWSVAITNTA ATSLWVPPHAFAPRSTLVSQQRLLSTER GRTAQLTAVLREFLDPRLISTEENTQAAE TMGTLSAPPCTQRIKWKGLLLTASLLNF WNLPTTAQVTIEAEPKTVSEKGDVLLLV HNLQONLTGVIWYKQGMKDLHYHYITSY VVDGEIHIYGPAYSGRETAYSNASLLIQNI VTQEDAGISYTLHIKKRRDGTGGVTCGHF TFTLHLETPKPSISSNNLPREAMEAVILT CDPATPAAGYVQWWMNGQRLSPMITHR LQLSKTNRLTIFGVTKYAGPYECEIRNP VSAVSRSDPVTLLNLLPKLPKYITINNLN RENKDVNLFTCEPKSEMYTYIWWLNGQ SLPVSPIVKKPIENRILILPSYTRNETGPY QCEIRDYGGIRSDPVTLLNVLYGPDLPRI YPSFTYYRSGEVLYLSCFADSNPPAQYS WTINGKVFSLQOQKLSIPQITTKHSGLY ACSVRNSATCKESSKSITVYVSDWILP |
| 3039 | 11090 | A | 3986 | 212 | 461 | TEEHLYSPIHWKGCGRKVKRLFQVRRGR GWIQTRQFGSMVKEPPLSEAGAESHVSC /RQGDSCRPPSFPLSPERVTPWLPDSHTW |

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| 3040 | 11091 | A | 3987 | 1 | 2353 | MRPPRAPVPPDLGGPRLCPVPAAGGAR SPSSPYSVETPYGFHLLDLFLKYIEELER GPAARRAPGPPITSRRPRAPRFLAGARS PGAWTSSESLASDDGGAPGLSQGAPSG LLMQPLSPRAPVRNPRVEHLTRESRL ELAQOTHERAPSPGRGLVREQMAAALRR LRELEDQARTLPELQEQVRLRAEKARL LAGRAQPEPDGEAETRPDKLAQLRLRLTE RLATSERGGRARASPRADSPDGLAAGRS EGALQVLDGEVGSLDGTPQTRVAAEA VPETREAGAQPETREAGVEAAPETIVE ADAWVTEALLGLPAAERELELLRASLE HQRGVSELLRGLRELEEAEEAAEAAA GARAQLREATTQTPWSCAEKAAQTESP AEAPSLTQESSPGSMDGDRAPVAGILK SIMKKRDGTPGAQPSSGPKSLQFVGVLN GEYESSSEDINDSDGSENGGAEPGGS SSGSGDDSGGSDSGTGPSSGGDIRDPE PEAEAEPPQVQAQRCLESPRLREACVAL QRQLSRPRGVASDGGAVRLVAQEWERY SSORRSQAEPMARMLEGVRRGLPELLAI VYNLADGNGNTALHYSVSHGNLAIASLL LDTGACEVNRQNRAGYSALMLAALTSV RQEEEDMAVVQRLFCMGDGNAKASQT GQTALMLAISHGQDMVATLLACGAD VNAQADGATALMCASEYGRDLTVRL LLTPQGCDPSILDNEGPSALAVALEAET GMKVAALLHAHLSSGHPDTQSGVTPLA PQTANTW |
| 3041 | 11092 | A | 399 | 2 | 510 | FLANFLCFIRD/GFHHVQGDLHLLT*S ACLGLPKCWYDRIREPLRPTSPLLSRPHQ ALCCLAFGHSAACTCVNSALAWAGF WNPAQAFGSVAPAHLLTHTVLSMPML WATCSPGAGHEAPGLMLQDPFGPPWCS CGPVFHEKTAGCKARAFSGRVCCKAQ ALPETGR |
| 3042 | 11093 | A | 3990 | 53 | 364 | RSKVEAGLAPEPGPLGARVGS/PGTRAR HGRFGPA/GASIGPGCGPNEQVDEQAGP AQLQCPQGPAPRAIGFPHLRLGGSCKI KGDGPGVRRPGSDRLSSSPT |
| 3043 | 11094 | C | 3991 | 408 | 620 | |
| 3044 | 11095 | C | 3992 | 64 | 300 | MDSSSHSTTLXPTANPNTGLVEDLDRITGP LSMTTQQSNSQSFSSTSHGLEEDKDHPIT TSTLTSSNRNDGHRWKKRPKSF* |
| 3045 | 11096 | A | 3993 | 1 | 530 | |
| 3046 | 11097 | A | 3994 | 1 | 436 | |
| 3047 | 11098 | A | 3995 | 3 | 1009 | |
| 3048 | 11099 | A | 3996 | 1 | 2226 | |
| 3049 | 11100 | A | 3997 | 2 | 1599 | QPLPGSVRHPFVLRRLPRAQGSSSSFR PRPPFAPDITMDKFWWHAAWGLCLVPLS LAQIDLNITCRFAGVPHVEKNRGYSISRT EAADLCKAFNSTLPTMAQMEKALSIGFE TCRYGFIEGHVVIPIRHNSICAANNTGV YILTSNTSQYDITYCFNASAPPEEDCTSVT DLNPAFDGPITITTVNRDGTIVYQKGEYR INPEDIYPSNPTDDVSSGSSSER/SSTSG GYIFYTSTVHPIDEDSPWITDSTRIPA TNMDSHSTTLQPTANPNTGLVEDLDRIT GPLSMTTQQSNSQSFSSTSHGLEEDKDH PTTSTLTSSNRNDVTGRRRDPNHSEGSTT LLEGYTSHPYHTKESRTFIPVTSAKTGSF GVTAVTVGDSNSNVNRLSGDQDTHFHS GGSHITHGESDGHSHSGSQEGGANTTSG PIRTPQIPEWLILASLLALALILAVCIAN SRRRCGQKKLVINSNGAVEDRKPSGL NGEASKSQEMVHLVNKESSETPDQFMFT ADETRNLQNVDKMGIV |

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| 3050 | 11101 | A | 3998 | 245 | 1148 | FFGSTPTFPAPDTMDKFWHAAWGLCL VPLSLAQIDLNITCRFAGVHFVEKNRYS ISRTEAADLCKAFNSTLPTMAQMEKALS IGFETCRYGFIEGHV VIPRIHPNSICAANN TGVYLITYNTSQDYTYCFNASAPPEEDC TSVTDLPNAFDGPITITIVNRDGTTRYQK GEYRTNPEDIYPSNFTDODVSSGSSSEER ESTSGGYIFYTSTVHPIPEDFSPWITDS TDRIPATRDQDITFPQWGFPLPLHGSEFR WDTHMGSGQRWEQTQPLGPIRDTNPSQ NGLJHLGHPLALGL |
| 3051 | 11102 | A | 3999 | 3 | 327 | AGPGEVACDGRDSGGPAGGRRCWLNW SGSGKSLRKGNPSVSIYCFCLPNHYLFDR N/SLRSSAGTKSGSYPPQISSMLLILVFP CVPQQTTHPLGLDKTKQLSLSALI |
| 3052 | 11103 | B | 4 | 3508 | 3762 | MTPGVVHASPPQSQRVPRQAPCEWAIRN IGQKPKEPNCHNCGTHIGLRSKTLRGTPN YLPRIQDTHPPSVIFCLAGVGVPLP* |
| 3053 | 11104 | A | 40 | 25 | 412 | IQARKKQOSVLGKTEDQGTFNLLRKGI MDIEAYLERIGYKKFTSKLDFETLTDILS HQIPAVSFDNLTVLCGDAMDGLGEAIFD QAVR*NR/GGWLQVNLHLYWALTITIG YETTKIGRYGYOTPAEK |
| 3054 | 11105 | A | 400 | 249 | 434 | IVEYRGMWDYRLLFFPETESCSVAQVG TQWHDLSLQLSPGSSNSPASAS*VAGI TGTH |
| 3055 | 11106 | A | 4000 | 8 | 280 | SAQMAVTTADPRVRPRVRTTFTVTSIAHT DTMVHLTPVEKSAVTALWAKVNVNVNEV GGEAFGGQCWVVLPLGPPKPLKPPGGI CPNSLNAG |
| 3056 | 11107 | A | 4001 | 405 | 647 | |
| 3057 | 11108 | A | 4002 | 405 | 606 | |
| 3058 | 11109 | A | 4003 | 1 | 849 | |
| 3059 | 11110 | A | 4004 | 2 | 1173 | PQQSPECDVLPVSVCSHWSIPTSHRLLR VLVTVECELYVRWPRCNADLTCTKAVQ NGWDLLKVPTCLHLLAVPGVGLFIDEG VKQGSFVETFRDTRGVLVHGCMSCLCN NRVRPYLGKKQKSKKCTDVGVEVEESG RGCAAGAEVFCMQQGSASHAEGQES SSKVESGRHSYNLYLVVISPRTPASLQN LQILK CIRFWTWHEERFLYMLMEYVPGG ELFSYLNRNGHFSSTTGLFYSAEIIAIEY LHSKEIVYRDLKPENILLDRDGHKLTDF GFAKKLAAYRLMWKSLSEKRWVWRGCG GEAKER*Q*QQGFWVPASRKVR*SQDT CPHHRKQGRRTWTLCGTPYLAPFVIQ SKGHGRAVDWWALGILFEMLSGVVL |
| 3060 | 11111 | A | 4005 | 149 | 1358 | APPSHCLCVSVSRAEPTQRRGRAGWAS VDAAAAAAPSEAAASRGVRLPERSGLAR RPGPECLPMEAPGAQAAAAESNSREVT EDAADWAPALCPSPEARSPEAPYRLQD CDALVTMTGTGTFGRVHLVKEKTAHFF ALKVMSIPDIVRRKQEQHVHNEKSVLKE VSHPLIRLFWTWHEERFLYMLMEYVPG GELFSYLNRNGHFSSTTGLFYSAEIIAIE YLHSKEIVYRDLKPENILLDRDGHKLTDF FGFAKKLVDRTWLTCGTPYLAPFVIQS KGHGRAVDWWALGILFEMLSGPPFFD DNPFYIQKILAGKLYFPRHDFHVK/DG ANDVNHRHWRFSVDWKA VPRKLPPI VPTIAGNGDTSNFETYPEHWDTAAPVP QKDLEIFKNF |
| 3061 | 11112 | A | 4006 | 1 | 683 | |

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| 3062 | 11113 | A | 4007 | 521 | 1163 | SQDTCPHHRKQGLRRTWTLGCTPEYLAP EVIQSKGHGRAVDWWALGILIFEMLSG AFPKHVSSNASPQLQNWGRFPFFDDNP FGIYQKILAGKLYPRHLDHFVKKCQTPK EKQKTKNKVFLHARHQKQNKNTNNNN SNNMKFIKNGANDVKHHRWFRSVDW KAVPQRKCLKPIVPTIAGNGDTSNFETY EHDWDTAAPVPQKDLFIKNF |
| 3063 | 11114 | A | 4008 | 181 | 1448 | APPSHCPRRSVSRAGRTRRRERAWGAS VDAAAAPSEAAAREARLPERSGLARCP GPBCVPMPEAPGLAQAAAESDRKVAE EIPDGAPALCPSEALSPPEPPVYSLQDFD TLATVGTGTGRVHLVKEKTAHFFALK VMSIPDVIRLKEQHVVHNEKSVLKEVSH PFLIRLFWTWIDERFLYMLMEYVPGEL FSYLRNRGRFSSTGLFYSAEIHCAEYLYH SKEIVYRDLKPENILLDRDGHILKTDGFG AKKLVDRTWTLGCTPEYLAPEVIQSKGH GRAVDWWALGILIFEMLSGFPFFDDN PFGIYQKILAGKUDFPRHLDHFVKDLIK KLLVVDTRRLGNMKNGANDVKHHRW FRSVDWEAVPQRKCLKPIVPIAGDGD TSNFETYPENDWDTAAPVPQKDLKIFKNF |
| 3064 | 11115 | C | 4009 | 3 | 167 | MPMXAQIEEPQIQVKTRLNRLTLQRE QDQIQKCLCPLYNQAPRKKFLLWA* |
| 3065 | 11116 | A | 401 | 532 | 986 | PWAKLGSCVPAWQVQVLAICRWKEVG ILDPLFFVFFFLR*SLDSDTQAGVQWC DLGSLQTLPLGKWFSCPSLPSSWDYRH APPRSADFCIFM*RWGFTMLAKLVSN* PQ/CDLPASASQAGITGVSQCTRRNLGIF IDGTSVSDSSRT |
| 3066 | 11117 | A | 4010 | 1 | 2195 | MDPGTLQASQOQPTAINPCDYYLKRNNI QTSWQRLTPIKWHVYILMGPGEKEAG RNLGIFGKWTPFPKIPAKRLRESNCPVDA QEIWLQAFREYLGRRGNFGPRRTCEP WEVESICSVESWELWLRQADSODSGKC SPDACGIIDTSLGRAGHCYLTRLWHVSG RIPPSFKLHHPGVCKFPKVGKMTTFKE AVTFKDVAVVFTTEELGLLDPARQKLYR DVMLENFRNLLSVGHQPFFHDTCHFLRE EKFWMMGATATQREGNSGGKIQTELESV PEAGAHEEWSQOIWEQIAKDLTRSQDS JINNQQFFENGDPVSPQVEAGLPTHTGQK PSQGGKCKQSFSDVPFIDLQPOLYSEKS YTDCDEGKSICYISALHIHQRVHMGKEC YKCDVCGKEFSQSSHLQTHQRVHTGKE PFGCGQ/CGKGFSRRSALNVHHLHTGE KPYICEACGKAFIHDSQLKEHKRIHTGEK PFGCDICGKIFYFRSLKSHSMVHTGEK PFRCDTCDKSFHQRSALNRHMCVHTGE KPYRICEQCGKGIFGRLDFYKHQVVHTG EKPYNCKE/CGKSFWRSSCLLNHQRVHS GEKSFKECECGKGFYTNSQLSSHQSHS GEKPYKCECGKGYVTKFNLDLHQRVH TGERPYNCKE/CGKNFSRAS'SILNHIKRL H/SPEKNPFKCEDCGKRLVHRTYRKDQ RDYSGENPSKCEDCGRRYKRLNLDILL SLFLNDT |
| 3067 | 11118 | A | 4011 | 1 | 4559 | MDGAKAFFSAVAAGFVILTCQLQWQW QHGGVHAHQWLQASGYRDACFCVST YSSGPSEFPPTLGTNLALDLEERKHR RKAKVWKGEGLRLSPRQSLAFAVRL ASRGTRSCHVSPYLGVSALSSPNPHPT TGAGPIPVQWRGLPOINQKNREIAIPLT LGMSTHLRRGCKNMSRFSPLHCCTTPIS TNFTDPGSHCKGAHDICLLIQNLKGAL PMSINRSYNAHPLLQISEAVTFKDVA VFT |

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| 3068 | 11119 | A | 4014 | 1 | 1387 | FRAASGRETRAALGASQCLTPHPLPRVG GGGASGGGLRGAGQAWSAMSSPDAGY ASDDQSQTSQALPAVMAGLGPCPWAE LSPIGDMKVKEAPANSAPAGAAGRA KGESRURPMNAPMVWAKDERKRLAQ NPDLHNAELSKMLGKSWNAVTLAEKRP LYVEEAERLRVQHMQDHPNKKYRPRRR QVKRI.KRVEGGFMHGMDEPQAAAMGP EGGRVAMDGLQFPEQGFAGPPLPP HMGGHYRDCQSLGAPPLDGYPLPTDTS PLDGVDPDPAFAAPMPGDCPAAGTYSY AQVSDYAGPPEPPAGPMHPRLGPEPAGP SIPGLLAPPSALHVVYVYAMGSPGAGGR GFQM/QPQHQQHQQHQQHPPGQGPSP PEALPCRDTGDFSPQAEELLGEVDRTEFE QYLHFACKPEMGLPYOGHDSGVNLPDS HGAISSEVS DASSAVVYCNYPDY |
| 3069 | 11120 | A | 4019 | 77 | 407 | ESDGGKRRKKSRGDPQLEKISKGCPC RRKKPRLYRPSNYRAFRMR/ARLPT RTSPETRTPTQPHSPHS/PERTPTPPGRPP FLGAGQLQRLFMGIPQVGDGCPSS |
| 3070 | 11121 | A | 402 | 2 | 992 | FVDAAGCPLRCSVVTGIVLQKSGNRPE DLRAAQLPGRLELLNNFCSAMSPAPDA APAPASISLFDLSADAPVFQGLSLVSHAP GEALARAAPTSCSGGERESPERKLLQG VLWTISEKLFCTCDQTFQNHQEQREHY KLDWHRFNKQLRQGOPLLSALGL*KA ELHRRSFPAFSGIRRIQDSASEDLQTL RERATFEKLSRPPGFYPHRVLFQNAQGO FSLCLPLCPR/LIRIPQKRQNLRLTLQS RGPRDCVILMAAAGHFAGAFQGREVV THKTFHRYTVRAK/QGHSQAGF/NARG GPSHAGANLRVRYNEATLYKVS |
| 3071 | 11122 | A | 4020 | 20 | 463 | SSDWKRTMSWIKEGELSLWERFCANI AGMPMKHIAFIMDGNRRYAKKQOVERO EGHFTGFKQLAETLRWCLNLGILEVTY AFSIENFKRSKSEVDGLMDLARQKFSRL MEEKEKLQKHGVCIRVLGDLHLPLDLQ ELIAQAVQATKNYNKCFNLVCFAYTSRH EISNAVREMAWGWEGQLLDPSDISELL DKCLYTNRSPHPDILRTSGEVRLSDFLL WQTSHSCLVFQPVLPWEYTFWNLFEAIL QFOMNHSVLQKARDMYAEERKROQLE RDQATVTEQLLREGLQASGDAQLRRL HKL SARREERVQGFQALELKRADWLA RLGTASA |
| 3072 | 11123 | A | 4021 | 572 | 1594 | RRWRICSTWTRSFATAWLPAPFANFPR TDRSQQDRGAPAQFALAPLEFPLWDT SQKFLQKPHCFMHGREAKMGRRAQOE SAQAENHLNGKNSSLTLTGCTSSAKLPR CR/QGGWAGDSVKASKFRKASEEIEDF RLRPQSLNGSDYGGDIP |
| 3073 | 11124 | A | 4022 | 2 | 365 | |
| 3074 | 11125 | A | 4023 | 1 | 464 | RRWRICSTWTRSFATAWLPAPFANFPR TDRSQQDRGAPAQFALAPLEFPLWDT SQKFLQKPHCFMHGREAKMGRRAQOE SAQAENHLNGKNSSLTLTGCTSSAKLPR CR/QGGWAGDSVKASKFRKASEEIEDF RLRPQSLNGSDYGGDIP |
| 3075 | 11126 | A | 4024 | 254 | 662 | |
| 3076 | 11127 | A | 4025 | 3 | 392 | MKYSAIQTLDGEIDLKLLTKVLAPHEV R*VQVWQQFPLGLSTLAIPNPAELPLAL CLP*RPWNGREKVSQLEKALSLSYPA KPFLVEDDVGDWDLHLEFVSSEVLTE WDPLQTEKEDPAGQARHT |
| 3077 | 11128 | A | 4026 | 63 | 779 | GPIRGPWGGPFGGWWGATPTAPTSLRRL RAAGLAPRRRAKMGRRAQESAQAEN HLNGKNSSLTLTGTSKAKLPCRQGGW AGDSVKASKFRKASEEIEDFRLRPQSL NGSDYGGDIPNDPEEVQEEFVLQVVA APPSIQKRVMTYRDL/DNDLMKYSAI QTLGDGDLKLL/TPKVLAPHEVRER NPSWQDDVGWDWTHLFTVSSEV/SFT EWOPLOTEKEDPAGQARHT |

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| | | | | | | EWDPLQTEKEDPGGQARHT |
| 3078 | 11129 | A | 4027 | 2 | 311 | |
| 3079 | 11130 | A | 4028 | 1 | 136 | |
| 3080 | 11131 | A | 4029 | 2 | 170 | |
| 3081 | 11132 | A | 403 | 2583 | 3827 | DRVSLLPRLECNAGAILAHNCNLC/SFGK *FSCLSLPSNWDYREVPPHQLIFVFLVE MGFHHIAQAGLELLTS/SP/PLA/FPKC WDYRDRDHAWLFFFCSEVNSFTLLPRLE *GGLISDHNCNLRLLGSSDLPASASQEPRL QACATTPR*FLYFW*RRGFTMLARLVN S*PQV/HPPASASQSAEIGVSHHTVPQEV FLFNLNFIYLRWSLALSPLRECSDGISAH CKLRPPGSSULLPQPE*LGLOQAPATTGP* FFCIFSRDGFSPC*PGGS*SPDLVICLPRPP KVLGLQV*ATTGYFYFFETGTHSVTWA AVQWYTHAHCSELELLSSSDPTSSSQVIG TTGAPHHAHLIYLFYLFIFIEMRVPCVV QAGLELLSSRDPFAWASQSAEITGMSHR AOLGHFKAPRMSV |
| 3082 | 11133 | C | 4030 | 64 | 276 | MCKALGTPYSPQQRLGTEASSVHRTC WHLLQGGSAAARXXXXXXXXXXXXXXXXXX XXXXXXXXVXSIDPTTQG** |
| 3083 | 11134 | A | 4031 | 3 | 295 | |
| 3084 | 11135 | A | 4032 | 3 | 279 | |
| 3085 | 11136 | A | 4033 | 3 | 392 | RIRHEAAAKGAAAMSAHLQWMVVRNC SSFLKRNKQYTSSTEPNNLKARNSPRYN GLISPARLWGVPEAADKGVVVVVTKR RSGQRKPAITSYLRRTTNKNARATLSSIR HMIRKYNKYRDLAHGHAGI |
| 3086 | 11137 | A | 4034 | 2 | 562 | VAAAKGSRRCQLRHLQWMVVRNCSS LIRKNKQDPTALSPNNLKARNSPRYNG LIHRKDCGTWSRSADGKGVVVVIKRR SQQRKLATSYVAGPSTRNARSHASGR HQ/VHIDFARNKLPPPTCRMGSPPFRAQR PFLAQAGRLVDWLKEGRDPAPPRSSLK PLGPQKQLKSAGVFSKKKKKR |
| 3087 | 11138 | A | 4035 | 1 | 139 | |
| 3088 | 11139 | A | 4036 | 1 | 299 | VGIW*PVTNFGVISGKTAIEMD*/G/TPYIH ALTNGLLTVEAPHK/ERIALKPGYGKLYS INDELVV/GRSDAIGPREQWEPVFQNDG HIPVMRMNSLQKATI |
| 3089 | 11140 | A | 4037 | 796 | 911 | AMA*YSYVSKSLVLKGT/SKKKKSTD KKKREDEETQLD/IVGIW*TVTNFGEISG TVAIWNRGKGTIHALDNLFTLGAPHK /ERIALKSGYGKLYGINSDDLGVGRSDAI GPREQCEPVFQNGKMALLASNSCFIRC EAGDIEAKSKTAGEEEMIKIRSCAERETK KKDDIPEEDKGNVKQCEINYVKFQSFQ DHKLKISKEDSKILKKARKDGLHETLAL DRRAKLEADRYCK |
| 3090 | 11141 | A | 4038 | 193 | 754 | EPSRGVWPHEPARINGSKKKKSEKKR KREDEETQFD/IVGIW*TVTNFDEISGTI AIEMDEGTIHALDNLFTLGAPHKEGK MALLASNGCFIRCNEAGDIEAKSKTAGE EEMIKIRSCAERETKKKDDIPEEDIGNVK QCEINYVKFQSFQEHKLKISKEDSKILK KAQKDGFLHETLLDRGP |

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| 3091 | 11142 | A | 4039 | 213 | 919 | YVQSLKQILSGCT*ESIAIKKKKKNDKKR KREDEETQLDIVGWWTYNFGEISGTI AJEMDKGTYIHALDNLGFTLGAHPKEVD EGSPPEQFTAWKLSRSLAKSGYGKY LGINSDDL VVGRSDAIGPREQWEPVK MGKMLSTNSCFIRNHEAEDIAESKT AGEEEMIQGS*SSVQPFHLLWTF AFLIT QEHRSLLLKIRSCAERETKKKDDIPEEDK GNKQCEI |
| 3092 | 11143 | B | 404 | 1 | 336 | MGRARWLTLPALWEAEAGSRVVEE YMGAEAVKSWTSSMFKEWDEKVRREK TSSRRARAQCGGVFESPEYVHLLKVFL EDLDKQQQTNASKASRQEIIRAELEIK T* |
| 3093 | 11144 | A | 4040 | 802 | 1463 | AEATALENPLEESRPBEDARINGSKKKK SKDKKKRREDEETQDIVGWWTYNF GGISGTIAIEMDEGTYIHALDNLGFTLGA PHK/RIALKPQYKYLINSDELV/VGRS KAJGPREQWEPVFNQACAAAGFTVIGSE KQSECSLLRESRAKYHGTGQISSSLK QHPRWMYSHQEDLKVWSLVEKKVTFE HIYLLKRNNSHHSIAEAMYGRLSNYI |
| 3094 | 11145 | A | 4041 | 879 | 1051 | GGARYHFFFFFDFDACSNTQAGVQWP ILGSLQPPPPRFKQFSCLSLSSWWDYRDD |
| 3095 | 11146 | A | 4042 | 125 | 1366 | RDSSTSLSHSKAKCACGFPSTHKSQGT RFTSVRCLKYKSAKSLFHIGYREAAVWC CQRLVPCTRRTQESSLDATNLQHASWS RLCRRGASRTSSAARSRSRPAVEGCNR SPGAPQAPARRRRPSRGAPGRAMVKV A/FNSALAQEAKKDEPKSGEEALIIPD AVA VDCDPPDDVPVQRRRAWCWCM CFGLAFMLAGVILGGA YLYKYFALQPD DVYYCGIKYIKDDVILN/ESPSADAPAA LYQTIEENIKIFEERRSLNFSVPPEPAD SDPAKIVQDFNQETYPYLDNFNLDCY VIP/LNTSMCYATPKTLLELLINIKAGNLF ALSPYLDMSRMHMGYLLDRINIDHPGA FYRLCHDKETYLQRRRETIKGIQKREAS NCFAIRHFENKFAVETLICS |
| 3096 | 11147 | A | 4043 | 42 | 557 | QAGKLRPGGLDSRSRSSAAGLDRDQGL HRVAFLPKRRTGGTRMDRSATAATAP AAPAGEGGPPAPPNLTNNRRLQQTQAQ VDDVVDIMRVNVVDKVLERDQKQSELD RC/ADALQAGASQFETSAAKLKRY/W WKNLKMMIILGVICAILIIVYFQHLNP RGVCPA |
| 3097 | 11148 | A | 4044 | 178 | 731 | SSERCHQOVFIPMPALPPGFSQAGSCVP TGSSSLV/CLLAASLLFVFTLALLTGATT CWCLHNKRLAV/RRFLAWAGAFGLVLS TRLIHGRTSYFYNLSLPLQTNSTSCQN/H SWDSGGRGDLWPPLAAPRRVLDLCLSC QAHTCQQGADWIHALLCLMGVTGVPTA LPKHLQNTSPFVYDAE |
| 3098 | 11149 | A | 4045 | 3 | 155 | |
| 3099 | 11150 | A | 4046 | 100 | 448 | WWEVKGMSHGQKNQEGGAJHFRACV CMVHESVTVRLCSGAISAHCNRLQGS SNSPDSASRVAGTTSTRHEAQLIFVLAE TGFHHVQQAELLTSSDPPTSASQSAD MLYK |
| 3100 | 11151 | A | 4047 | 151 | 461 | RLTAAATASLCP/PRP/TRLPLSRGSKM KEGMSNNSTTSISKPRKAVEQLKMEAC MDRVKVSQAAADLLAYCEAHVREDPLI IPVPAENPPFREKKFFCTIL |
| 3101 | 11152 | A | 4048 | 1 | 447 | |
| 3102 | 11153 | A | 4049 | 553 | 1938 | |
| 3103 | 11154 | A | 405 | 2 | 313 | FFFFLRRSLASPRLECSGVISAHC/LRP GSR/RFSCLSLSHSDYRRPPRANFLY FLVEKGHFICVSDGLHLLTS/AIPP/TA/F |

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| | | | | | | PKCWDYRCDSMNFMLVSKD |
| 3104 | 11155 | A | 4050 | 303 | 478 | DCTSRPSLCPLSARCDVHGLSPGPVELVR* GLIVIEDALPKSHSGRGEVRQPWDFCG A |
| 3105 | 11156 | A | 4051 | 458 | 964 | DPRTMNLAIISIALLLTVLQVSRGQKVSTL TACLVDQSLRLDCRHENT/SAVSPIQYEF SLTRETQKHVLFPTVGVEPHYRSRINF TSKYNMKVLYLSAFTSKDEGTYTCAIH HSGHSPPNSSQNVVPFRDHGVK/CEGISL LAQNASWILLLLLSLSLLQ.ATDFMSL |
| 3106 | 11157 | A | 4052 | 411 | 557 | YSTDELPNIKISTSGRLQWLMISIPALWE A/EDQAGRSFEFRNLRLVWTT |
| 3107 | 11158 | A | 4053 | 508 | 1220 | PLPPAATPCPKKQLGSQAWACRAARGA EQGVWGWWRKHAPSRGRVDKGSTKQK DPSPAHTTSTLNYQMHSVC/HKRRHTHT HTHTHTHTHTHTHQHNIPGPGSPDQE EAGQVVEKKAANPSHNPTLQDRRVSSIL SCCKRKLEAPSPQISMVGPGRGNSLWFP HWQRQEPAKCSFGLKEQWGGDFSRM NRLMGPGVNPSTSPFWSRKLHGKDV CWLRRHRAKLSARCPRIWRVW |
| 3108 | 11159 | A | 4054 | 1609 | 1807 | DRVWLLPREYSGMVSAHCNTLLGSS QSPTSASQAAGTGAHYVPQLVYIYIY JLGLFVETFR |
| 3109 | 11160 | C | 4055 | 169 | 297 | MILEFHXXXXXXGGGRFKEPLGGPNLP GAGKVFLFSWGAD* |
| 3110 | 11161 | A | 4056 | 270 | 614 | PFKEILTOVIRDPFSSEPYLGEKANHPP GFHHVKGOQASHVCKTHPAPSCPP/PDC CLPCPSLGFAPHFRCCEMEFPKGNFR LDPFYLDNIFRFPCLSVTYPGKELARTFF |
| 3111 | 11162 | A | 4057 | 637 | 890 | TKWAGSIVYLSFSFLHMFMSFLLLV/STF LALCMLILVVLFLKLPPKLFSELPLKL TFLPCELLHLHLLFQDLAYFFFNGLRK |
| 3112 | 11163 | A | 4058 | 3 | 297 | ATAARPCPGLGRRAGESRGPGHIGVRPG STLCQIATCHMSVNDGGCKYVLCRWE KRLWPAKVLARTATSTKNKRKEYFLA VOILSLEELSVVLF |
| 3113 | 11164 | A | 4059 | 2 | 1940 | CPGLGRRAGESRGPGHIGVRPGSTLCQI ATCHMSVNDGGCKYVLCRWEKRLWPA KVLARTATSTKNKRKEYFLAVOILSLE EKIKVKVSTEVEILEKSQIEAIASSLASQNE VPAA/PLEELAYRRSLRVALDVLSSEGI WSQESSAGTGRADSLRGKPMHEVSSPC DSNSSLPGRDVLGSSRPHRRPFCVQSL SSSFTECKDPECKVDHKKGLRKSSENFRG PLVLPAGGAQDESGRJHIKNTLASK RGRNSAQKASCLNGSSLEDDETERDM GSKGGSWAAPSLPSGVREDDPCANAEG HDPGLPLGSLTAPPAPSPACSEPGCEPA KKRPRLDGSORPAPVOLEPMAAGAASP GPGPGPRESVTPRSTARLGPSPSHASADA TRCLPCPDSQKLEKECQSSESMGSM RSILEEDEDEEPKVVLYHEPSPFEVGM LVWHKHKKYPFWPAVVRSVRQDKKA SVLYIEGHMNPMMKGFTVSLKSLKHDFC KEKQTLNQAREDFNQDIGWCYSLITDY RVRLGTWAGLEGWSWAAGVQPLKTPW TGWAGAAWRGIFPWAAGWGPCWAGV LAWFDYFLNRDAGPAGTHFLGLLLGLH SALSPFPFAGCGSFAFSLEYAADISKS TGT |

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| 3114 | 11165 | A | 406 | 4565 | 5027 | LIGYILFCFFFFFLLRQSLVLLPQLECSG VILAHCNPR/LPGFK*FSCLSLPSWNYR HAPARPVSVFVLAEMGFHIIQAGLKL LT/SV/PP TSA/FRK CW DYRREPRTA/F FVLNKF T V L G S N S G F * T * D H R I N H F M R L Y C N Y T L E Y S G S H L |
| 3115 | 11166 | A | 4060 | 1 | 2722 | MERPLRGRHPRLPFPVPPGVLGSPQSHIG VRPGSTLCQHATCHMSVNDGGCKYVL CRWEKRLWPAKVTAI/RTVSLGRNDFR VTKTSVTGPSILKYLVFEPVTLNQRLLTFK RQITDDQA AHCSAPIKVKSTEVEILEKSQI EAIASSLASQNEVPAAPELEAYRRSLRV ALDVLSEGSWSQESSAGTGRDNRSRLRG KPMHVSSPCDSNSSSLPRGDVLGSSRPH RRRPCVQQSLSSSFTCEKDPECKVDHKK GLRKS ENPRGLVLPAAGGAQDESGSRI HHKNWTLASKRGGNSAQKASCLNGSS LSEDDTERDMGSKGGSWAAPSLPSGVR EDDPFCANAEGHDPGLPLGSLTAPPAPEPS ACSEPGECPAKKRPRLDGSQRPVAVQLE PMAAGAAPSPPGPGPRESVTPRSTARL GPPPSHASADATRC LCPDPSQKLEKECQ SSEESMGNSMRSILEEDEDEEPPRVLL YHEPFSFEVGMVLVWHKHKKYPFWAVS WDESTRGWISRLKAAFR TIALHHPKSN AQ NRCHLTSPSLRVPGAHLRSQPKPSGPR CPA FRPAQAI GSPVPTCVQISFIRVPG AHLRSQPKPSGPRCPPEFQLRAQTCAW CVSHLPEGPCARRLPEPLSGRNQAREDF NQDIGWCVS LITDYRVRLGCGSFAGSFL EYAAADITSRACGALIPWATSSVSLW LVAAHIRCCECRGASFAGYVVRKSIQ QDVLGTKLPOLSKGSEEPVVGCPGLQR QPCRKMLPDRSAARDRANQKLV EYIV KAKGAESHLRAILKSRKPSRWLQTLSSS QYVTCVETYLEDEGQLDLVVKYLQGVY QEVGAKVLQRTNGDRIRFILOVLLPEAI CAISAVDEV D Y K T A E E K Y I K G P S L K L P G K R N I |
| 3116 | 11167 | A | 4061 | 57 | 235 | |
| 3117 | 11168 | A | 4062 | 754 | 1767 | WTSWWMSVLTILLFSLQGNKMLNYS PSAGGCLLDRKAVGTPAGGGFPRRHSVT LPSSKFHQNLSSLKGEPAPALSSRDSR FRDRSFEGGERLLPTQKQPGGGQVNSS RYKTLCRPFEEGACKYGDCKQFAHG IHHLRSLTRHPKYKTELCRFTHTIGFCPY GPRCHFHNAEERRALAGARDLSADRPR LQHSFSFAGFPSSAAATAATGLLDSPTSI TPPILSADDLLGSPITPDGTNNPFAFSSQ ELASLFAPSMGLPGGGSPITFLFRPMSES PHMFDSPSPQDLSQEGYLSSSSSHS GSDSPTLDNSRRLPISRLSISDD |
| 3118 | 11169 | A | 4063 | 568 | 715 | |
| 3119 | 11170 | A | 4064 | 65 | 347 | GLPAPLPPP/PPRSLPFPAPGLRSQRFTSA PPRHARPPVVARARAPPHQPASGRKSO VSAPLVERAPLRAPGLTATAVTVLGD ACAFPLEM |
| 3120 | 11171 | A | 4065 | 1648 | 1974 | KVFECFYRIYVICVCVCVCVC/TLQTL/C YSIANMLTSSQCLQSCGSQSWCOMHKS SKAIMTIPCKFISRKPWEGDCSSLEPHGV SAFDIWWPQLCIKKVLNHFSPRKN |

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| 3121 | 11172 | A | 4066 | 12 | 1662 | FLRGCCFCYMTQCRPSLRFTALLPERS VPPLPPAAPPRVRHPVVAAPPARRCPAP APPPPPFDDWVWMLDMGDRKEVKMIPK SSFSINSILVPEGLQNDNHASHGHNSH HPQHIIHHHHHHHHHPPPAPQPPPPRAA QQOQP PPPPLAPQAGGAQSNDEKGPOL LLLPPTDHHRRPSPGAKAGGCCRPGLGP VGPDEKEKGAGAGGEEKKGAGEGKGD GEGGKEGEEKNGKYEKPPPSYNALIM MAIROSPEKRLTLNGIYEFIMKNFFPYRE NKQGWINSIRDNLNKNCFVKVPRHYD DPKGNYWMLDPSSDDVFIGOTTGKLR RRS'VTSRAKLFKRGAA'LTSTGLTFMD RAGSLYWMSFSLSHHPRASSILSYNG TTSAYPSHPMPYSSVLTQNSLGNHSHST ANGLEAWDRLVNGEIP/YTATHHILTAA ALAAISVPCGLSVPCSGTYSLNPCSVMLL AGQTSYFFPHVHPHSMTSQSFMSARA ASSSTSPQAPSTLPCESLRPSLPSFTGLS GGLSDYFTIQNGQSSSNPLH |
| 3122 | 11173 | A | 407 | 187 | 741 | TRGTSAAITGRSSGIASMASGILVNVKE EVTCPICLELLTQPLSLDCGHSFQACLT ANHKKSMLDKGESSCPVCRISYQENIRP NRHVANIVEKLEKVLKSTEGQKVNDCA RHGEKLSUFCQEDGEGSCFWC*AVFR EHRGSPHYSSQRRFAREYQVKLQAAL MLRQKQQAEELEADIR |
| 3123 | 11174 | A | 4070 | 1 | 507 | |
| 3124 | 11175 | A | 4071 | 259 | 1409 | FLLRWRYFVGVITEEKEKVQPTVYLIQL DLLKAIT/SPHLEAGSKPSKKTGEKSSGS SSHSESKKEHHRKKVSGSSGELPLEDGV SHKSKKMKPLYVNTETLTLREPDGLKM KLILSPKEKGSSSVDEESFQYPSQATV KKSSKK SARDEQGALLGHLEQSF LKTA RKKHKSSSDAHSSVGPGLKGLGLDA'SQ FRKSPHSANLDLSGLEPILVESDSSSGGE LEAGELVIDSSVREIKKKKSKSKKKKK DKEKHKEKRHSKSRSLGLSAVPVGEVT VTSGPPPSIPYAGAAAPPLPLPGLHTDGH SEKKKKKEEKDKERERGEKMGPSWKK ISSGLPLILHDGPWKNCPPRNYVPKRL RTADLVGLYLGSKIK |
| 3125 | 11176 | A | 4072 | 436 | 2063 | RRREVEGWYFGGFSHRRTVICDTPDISS LESSQKKKKKSSPQSTDTAMDLLKAITS LAAGSKPSKKTGEEKSSGFKAISGELKR EIHRRKKVSGSSGELPLEDGGSHSKKMK KPLYVNTETLTLREPDGLKMKLILSPKEK GSSSVDEESFQYPSQATVKKSSKK SAR DEQGALLGHLEQSF LKTA RKKHKSSSD AHSSPGEGCGSDASQFAESHANLDLS GLEPILVESDSSSGGELEAGELVIDDSYR EIKKKKKSKSKKKKKKKEKHKEKRHSK SKRSLGLSAVPVGEVTVTSGPPPSIPYAG AAAPPLPLPGLHTDGHSEKKKKKKEEKDK ERERGEKPKKKNMSAYQVFCKEYRVIT VADHPGIDFGELSKLAEVWQKLPKED KLIIWKQKAQYLQHKQNKAEATTVRKR ASSSEGSMMKVKASSVGLVSPQKSPPTT MLLPASPAPAKAPETPIDVAHLQILGESL SLIGHRLQETEGMVAVSGSLSVLLDSIIC ALGPLACI.TTQLPELNGCPKQVLSNTLD NIAIYMPGL |
| 3126 | 11177 | A | 4073 | 323 | 539 | PFMICLVHFCAPGNPPSARPRPSPSRCH PCAPQEGKMTTHPQFRVMPAPSCYNWLL ENVVFIQNSGVRIS |
| 3127 | 11178 | A | 4074 | 27 | 425 | GGGSGPRAPSATLLDTGESVAAVASGED KGIAASAAAAVAFACSCSPDPQSSMTNP VYSPVQGPAGYGNPKNMAYTGYPTAYP AAAPAYNPPLYTINSPSYAPATLVMKQ |

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| | | | | | | AWPQNSSSCGTEGTFHLPVDTG |
| 3128 | 11179 | A | 4075 | 1 | 434 | |
| 3129 | 11180 | C | 4076 | 117 | 251 | MVPGPSLQNSWQASFNIPWPALPKPDLG PSPSPVDFICGACC* |
| 3130 | 11181 | A | 4077 | 58 | 313 | SSKQNKPNKESKTTKQNKQIYTSYTQARP WGFPIFTPGLCFENTYKFFDQTTWKTLV KSSSSSSSSSPILFLFKM*VPIKFKN |
| 3131 | 11182 | A | 4078 | 1 | 279 | |
| 3132 | 11183 | A | 4079 | 54 | 946 | GGSGPRAPSATLLDTGESVAASGSD KGLAASAAAFAVACSCSPDQSSIMNP VYSPVQGAAPYGNPKNMAYTGYPATYP AAAPAYNPSPYPTNSPYAPFQFLHSA YATLLMKQAWPQNSSSCGTEGTFHLPV DTOTENRTYQASSAATRYTAGTYKVP TQNTAFPPYSPSPNYQTAMYPISAYP QQNLAYQAGAYYTPQVYAAQPHVIIHTT VYQPNISFSAIYPAPVAAPRTNGVAMGM VAGTTMAMASAGILLTTQHTAIGAHPVS MPTYRAQGTFAYSYVPPHW |
| 3133 | 11184 | A | 408 | 1234 | 1337 | TRGPRGFADSCRKAWSKAWQRGPWS WCPAAGASGGCPLHPWLW/PEPWVE RATPT*GPCSRTAPGSPPLPGLRPLGA AVCRPFGPCSETVLF*EAE/PT*APVRI GGTFQPCAVLLPARKMVVQSSTVR*VT VTRLPVQKVEVAGWPGSHEKTLPA/ PAWGLDRKPLQAPRSQPKPNPQGTAE GQRWAHRYKCCFVSLTPCSSQLPV*DL ASKG*PSHT*ILGSF*DLCLPA*PMLQGPC PQPLSAP*VLFPSLS*VGALIGPFLARFP SRGQLP*AWATPPWPS*PLAK/SPPDVAC SLVPGPSFSPSHFSAVVEPHL*APGALN VLSPLDLMCIPSAASYAAKAPQAVNGG SCHTSLPELT*P*PATSIGILRAGPCSLM GPPRPVKPW*RLACLGLNSQCLTPQPK TGSVPYGSFPAWVP/ERLPPGSP*PPAP IKVLPLMQACVDHVFPWPEPPATGQQL PF |
| 3134 | 11185 | A | 4080 | 1 | 502 | RHEGGMWRAGSMSAELGVGCALRAVN ERVQQA/VARRPR/DLPSQSRLVAV/SA KTKPADMVIEAYGHGQRTFG/ENYVQEL LEKASNPKILSLCPEIKWHFIGHLQKQNV NKLGMKSEFLIKRENIMPRTELNSPFSGV IYTWETYPSTMFHJWWSFRKIKNCSP |
| 3135 | 11186 | A | 4081 | 171 | 1184 | IPILMKLLCCHKSSGDPPIYHLFAKSKH STLPFSLGLGVGPRGMWRAGSMSAELG VGICALRAVNERVQQA/VARRPR/GDLPAI QPRLVAVSKTKPADMVIEAYGHGQRT FGENYVQELALEKASNPKILSLCPEIKWH FIGHLQKQNVNKLMAVNPFLMFAETVG FCECLADKVNSSWQQRK/GSPERLKVGM PGFNTSREETILFSVSLLEGKHGLPPSETI AIVEHINAKCPNLFEVGL/MTLG/FSFGHD LSQGPNDPQQLLSLPEE/ICGKKNIPAE QVELIMGMSADFQHAHEVGSNTNVRIGST IFGERDYSKKPTDKCAADVAPLEVA QEH |
| 3136 | 11187 | A | 4086 | 1 | 265 | AGNRLRFQLELEFVQCLANPNYLN/WYP QCLHMLELLQYEHIFRKELVNAQCAKFID EQQILHWQHYSRKRMRLQALAKQQQ QNNTSGK |
| 3137 | 11188 | A | 4087 | 1 | 987 | |

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| 3138 | 11189 | A | 4088 | 1 | 491 | RGFRNFARVSGLLLCQAGGVLVSSFVM AAAVAMETDDAGNRLRFQLELEFVQCY ANHNTLIFLPQRGYFKDAFVNYLYL LYWKDPEYAKYLYPQCLHMLGAAPN MEHFRKEAGWNAQCAKFIGWNRQVST LGKHYSRKRMRLQQALAEQQQNNTS GK |
| 3139 | 11190 | A | 4089 | 55 | 858 | EKGRARGRERRRKMQLTRCFVFLVQG SLYLVICGQDDQPGPSEDPERDDHEGQP RPRVPRKRGHISPKSRPMANSTLLGLLAP PGEAWGILGQPPNRFNHPSPSAGKKKIF GWGDFYSNIKTVALNLLVTGKIVDHGN GTFSVHFQHNATQGGNISLVPPSKAVE FHQEQQIFIEAKASKIFNCRMWEKVEVR GRRTSLFTHDPAKICSRDHAQSSSTWSVC SQPFKVVVCVYIAFYSTDYRLVQKVCPI YNYHSDTPYYPSG |
| 3140 | 11191 | A | 409 | 89 | 596 | ILKTOSSLCHPRLECSQVLVHNRRLP GSSNSPASGSPVA*ITGARHHDRLIFVFL VEMGFCYVGOAGLELLTSSPPTSASQS AGVTGVSHCARPSFAJ*FKSA*YNLELC LFYHH*YSKCIHFLEFLDYNCQNLITINIE SSLIESILLISTFYCYLAEIPR |
| 3141 | 11192 | A | 4090 | 1 | 368 | MRARNLMTKLTIVISKKEELQQAAAAHR EVQSLPPGEMEERSSSKTCPOVCDGRILS CMIKVFPV/GREKH*RPGRSH*HEAGCG PFTPKVDHHEHLPRRVEAGSRQKQST TEFFQAAGW |
| 3142 | 11193 | A | 4091 | 253 | 536 | YLASLEIPQSKVPESRPSHQVPSSQSLDSE TPPSN/RHRQPVDYRKCVCRLPLPPPTF RPPKVDHHEHLPRRVEAGSRQKQSTTE PFPQAAGC |
| 3143 | 11194 | A | 4096 | 318 | 543 | KSSWSRWAFGTVRSPCGRQRHDIGATD NSGRSGPAEQRPQSS/ASSAMSAAGGSRL TFHPRNLPRTPTQDSAALT |
| 3144 | 11195 | A | 4097 | 42 | 342 | ENEILEVVQLGSRVCVFHFYHLHCCRHH CPENVHAG/CFGDCLG/HGRCSIQNCTFE R*1*VG*NNVAATAVMFGLVFPLVLSLK YQVYFFKVLALMNFCS |
| 3145 | 11196 | A | 4098 | 1 | 1289 | MYERVYVSTDIAIKLCKLLNRQFDRLY KKHSTGSASGEGIKALPLIVEGEGPVC AEITRQEREEGAVHLFGLT/QLOPVEGE LYANGVSKGNRGTESMDTTYSPGGKVS DKSEKKVFQKGRAJDTGEVDIGAOVMQ TIPPLGLFWRFOJTIHHPYILKFNISLAKDSL LGIYGRNIPPTHTQDFVKLMDGKQLV KQDSKGSDDTOHSPRNLLITLQETGFIE YMDQGPWYLAFYNDGKKMEQVFLVLT AIEIMDDCSTNCNGNGECISGHCHCFPG LGPDCARDSCPVLGGNGEYEGHGCVC RHGWKGPECDVPBEOCIDPTCFGHGTCT MGV/CICVPYGYKGEICEEDCLDPMCNSH GICVKGECHCSTGWGGVNCETPLP/EQC SGHGTFLLDAGVCSDDPKWTGSDCSTEH KGGSSRLFL |
| 3146 | 11197 | A | 4099 | 1 | 4509 | VRLEWPTDLAVNPNMDSLYVLDDNNVL QISENRRVRIAGRPPIHCQVPGIDIFLVSK VAIHSTLESARAVISVSHGLLFAIETDERK VNRIQQVTTNGEIVIIAGAPTDCCDKIDP NCDCFSGDGGYAKDAKMKAPSSLAISP DGTLYVADLGNVRIKRTISRNQAHNLNDM NIYEIASPADQELYQFTVNGTHLHTLNL TRDYVYNFTYNSGDLGAITSSNGNSVH IRRDAGGMPLWLVPVGGQVYWLTISSN G |
| 3147 | 11198 | A | 41 | 319 | 1002 | |

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| 3148 | 11199 | A | 410 | 372 | 639 | RAFWQYFKSLNMFMSFDPAILLIGIYPKE KS*IQK/DTLCEPVESEILLMVVKNNY*YIC HTRNDQAGLIY/HLYSGIYALK*VCEFF TLKG |
| 3149 | 11200 | A | 4100 | 338 | 8522 | SEMEQTDCKPYQLPKVKHEMDLAYTS SSDESEDGRKPRQSYNSRETHJEYNQEL RMNYSQSRKRKEVEKSTQEMEFCETS HTLCSGYOTDMHSVSRHGYQLEMGS DV DTETEGAASPDHALRMWRWGMKSEHSS CLSSRANSALSTDDHERKSDGENGFK FSPVCCDMEAQAGSTQDVQSSPHNQFTF RPLPPPPPPHACTCARKPPPADSLQRR SMITRSQPSAAPAPTSTQDSVHLHNS WVLNSN |
| 3150 | 11201 | A | 4101 | 139 | 520 | LSLPLSPRLCSGTILARCNIHPSPPRSKR FCSLSLSPSSWDYRRAPPNLAIFLLFLV EMGFHHVQGTGLELLASNYLPTSA/FPK CWDYRHEPPCPADKTNFLSWFGYNI LESEVNFPLPWA |
| 3151 | 11202 | A | 4102 | 7 | 497 | |
| 3152 | 11203 | B | 4103 | 93 | 182 | PPPKALRRELPEEAAAEEERRKIEVPSEIE * |
| 3153 | 11204 | A | 4104 | 51 | 394 | WGGPGLKPLLMVLDPYRAVALELQANR EPDFSSLVSPLSRRMAARVYLLLVSV CMCVCVCGAGTQRPEARTGPPTCPLLA S*PVLSAQILHVQKEKPYGRLLIQPGPR FH |
| 3154 | 11205 | A | 4105 | 427 | 499 | |
| 3155 | 11206 | A | 4106 | 796 | 2482 | KTRGNMFYYPNVLQRHNGCFATIWLA ATRGSRILVKREYLRVNVVKTCEEILNVY LVRVQPPQGLPRPFRSLYLSAQLOIGVI RVYSQCCQYLVEDIQHILYRLHRAQLQ MRIDMETELPSLLPNHILAMMETLEDAP DPFFGMMSPDRLSPFDIPQIRHLEAAI PERVEEIPPEVPTPEPERIPVTVLPPEAI TILAEPLRMLIEGEGRELPEVSRREL/DL LVIAEEEEAILLEIPRLPPAPAEEVGEIGEA LGPEELRLTGWEPGALLMEVTPPEELRL PAPSPERRPPVPLLRRRRRRLLFFWDK ETQISPEEFPRNNLOTRAHCWECPMV/Q PPERTIRGAELFRTPTLSGWLPPELLGL WTH/CAQPPPKALRRELPEEAAAEEERR KIEVPSEIEVPREALEFSVPLMVSLEISLE AAEEKSRISLIPPEERWAVEPEAPEAP ALPVVPEIPPEVPMEMPLVLPPLELLLN WKTIVHRAVALELQANREDFSSLVSP LSPRRMAIARVYLLVLVLSAQILHVQ EKPYPGRLLIQPGPRFH |
| 3156 | 11207 | A | 4107 | 136 | 423 | SPEHPQLGSLLRPPGAQIPSEWQVAEAT ALVHTLDGWSVVQTMVVSTKTDRKLI FGKGNFEHLAKKELEAAWGEVDFRFTV VLHILRCNARTK |
| 3157 | 11208 | A | 4108 | 1 | 212 | RPPIRRVVRGRHQPHGEPVRSAPVVRVP GEDDAAQPSAAERVGPRVPGAQGTVH QHHRGGLHRRRLRQ*RHQPHGEPVVR SGAPVVRVPGEDDAAQPSAAERVGPRV PGAQGTVHQHHRGGLHRRRLRQ |

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| 3158 | 11209 | A | 4109 | 1 | 1746 | AGRRTPGAALPRGPRPLGSAGSRAVLP RARASRCRPOEPRESGGAVGRREGPAGG RRRTKTERKTTRRSRKMRTTRPRSSCCGE SLCCRRGPKRVCLVHPDVKWGPGKSQM TRAEWQVAEATALVHTLDGWSVVHTM VVSTKTPDRKLIFGKGNFEHLTEKIRGSP DITCVFLNVERMAAPTKELEAAWGVVE GCLTAFTVVLQHL PACNARTK/ERARLQ VALAGDARLHRSNLKRDVAHLYRGV/G/ SRAYIMGSGESFH/MQLQORLLREKEAKI RKALDRLRKRHILRRQRTREFFPVSIV VGYTNCCKTTLIKALTGDAAIOPRDQL FATLDVTAHAGTLP SRMTVLVYVDITGFL SOLPHGLIESFSATLEDVAHSDLLIHVR DVSHPEAEALQKCSVLSTLRGLRLPAPLL DSMVEVHNKVDLPVGYSPTEPNVVPVS ALRGHGLQELKVELDAAVLKATGRQIL TLRVRLAGALNWLKYEATVQEVDPVIP EDGAADVRIISNFPYKFKRLFPRMN GRPOKACGVGASPALGELRRYPLCWGQ LGVRCRSLVLLVWFCITRLASQPFAGMYR ACR |
| 3159 | 11210 | A | 411 | 136 | 251 | IHQEKPPNIFSVKKRHYD*PGQHDLPLASA SQSAGITGV |
| 3160 | 11211 | B | 4110 | 50 | 382 | XGEQLVRQDLDAVGSEHSGDWLDQDSV SDQFSVEFEVESLDESDYSLSEEGQELSD EDDEVYQVTVYQAGESDSDSEEDPEISL LADYWKCTSCNEMNPPLPSHCNRCWAH X* |
| 3161 | 11212 | A | 4111 | 1665 | 1787 | FFVLLVETGFHRVSDQGLDLLTS*SAHL GLPKCWDYRHEPP |
| 3162 | 11213 | A | 4112 | 1431 | 1553 | FFVLLVETGFHRVSDQGLDLLTS*SAHL GLPKCWDYRHEPP |
| 3163 | 11214 | A | 4113 | 1740 | 1862 | FFVLLVETGFHRVSDQGLDLLTS*SAHL GLPKCWDYRHEPP |
| 3164 | 11215 | A | 4114 | 1 | 752 | DLDAVGSEHSGDWLDQDSVSDQFSVEF EVESLDESDYSPSEGGQELSDDEDEVYQ VTVYQAGESDSDSEEDPEISLADYWKCT TSCNEMNPPLPSHCNRCWALRENWLPE DTGKDKGEISEKAKLENSTQAEFGFDPV DCKKTIIVNDSRESCVEENDKITOASQS QESDYSQPSSTSSSIYSSQEDWKEFEERE TODKEESVESSLPLNAIEPCVICQGST*K WLHCPWQNRITSYGLLYMCKEAKEKE |
| 3165 | 11216 | A | 4115 | 426 | 813 | SSRRFVWRAKLLCERAGSQSTVYEI*QCA HRHPRHRHPQCCRHRLGYAGTAGPLAG YRPFQRHRSQSLWRAASAICVDAISMRT SRSTVRPLWPPSPARFATWSHYRLRDH GDHTRPVDLPTSQFTILL |
| 3166 | 11217 | A | 4116 | 1174 | 1354 | FFVLLVETGFHRVSDQGLDLLTS*SAHL GLPKCWDYRHEPLRPAGLFKHSPLYSQ PILT |
| 3167 | 11218 | A | 4117 | 2251 | 2373 | FFVLLVETGFHRVSDQGLDLLTS*SAHL GLPKCWDYRHEPP |
| 3168 | 11219 | A | 4118 | 1027 | 1193 | FFFFFFFFFGLVETGFHRVSDQSLDLLTS *SSRLGLPKCWDYRHEPPRAEEGI |
| 3169 | 11220 | A | 4119 | 983 | 1386 | QEVRYRKVETRLCLFSSCLVPVCAASP VSRPGCRFLRSSLIHWPTGRLVVRQGET FLVPEKTVIRGVASAPAKQAAGRTPVPG RPRDARLRADARS*SC*RAARPRRGASG AVGARCGPRPGPEPLRSSGFIY |
| 3170 | 11221 | A | 412 | 118 | 337 | IHQEKPPNIFSVKKRHYD*PGYQKTLSL LKIQILAGYSGTCLKSQLLRRVGREVIQL ALKIRAPIWKTECL |

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| 3171 | 11222 | A | 4120 | 6133 | 7646 | YMLFLFLSTKGWTVIQNRQDGSVDFGR KWDOPYKQGFNGVATNTDGNKYCGLPG NEQACKJKSFYKWDFF*LNHHCWKPV LGS*EEFPDKNVEAKDKGRKAVFSFKF YFW*EILFCFSFRAEYVLGNDKISQLTRM GPTELLIEMEDWKGDVKAHYGGFTVQ NEANKYQISVNVKYRGTVAGNALMDGAS HLMGENRDHDPFHNGHGSFPYD/RDA NDGWYVWHSLL*LSH*YHYSSESLTIF LIATTSWALTVSHCPKLFMHHSKAFOL* GRHSYSHTDEI*RDYVICPMHSNYPEIK LEFEHSYFLNNEHLDKYLVLKCV*KL SFSFPGFSDTKGCKSYSSIK*QTSQSDG LPORPSYLSFLL*GTGGLWCISVTLCLAP KGGTTVHTSVAVFYG*SAKRNLTIVVLF LITPNTFSRLTSDPRKQCSKEDGGGWV YNRCHAANPNRGYYWGGQYTDWMAK HGTDDGVVWMNWKGSWYSMRKMSM KIRFFPQO |
| 3172 | 11223 | A | 4121 | 333 | 430 | GRGDKPYPSPGDSWVQD*ILVQL*ICPQ EPS |
| 3173 | 11224 | A | 4122 | 2 | 1679 | |
| 3174 | 11225 | A | 4123 | 42 | 1465 | GRWPPRGRENALSKTLVDMDMADYS AALDPAYTTLEFENVQVLTMGNDTSPSE GTNLNAPNSLGVSAICAIGDRATGKH Y GASSDCGCKGFFRRSVRKNHMYSCRFSR QCVVDKDRNQCRYRLKKCFRAGMK KEAVQNERDRISTRSSYEDSSLPSINAL LQAEVLSRQITSPVSGINGDIRAKKIASIA DYCESMKEQLLVLEWAKYIPAFCEPL DDQVALLRAHAGEHLLGATKRSMVFK DVLLLGNDYIVPRHCELAEMSRVSIRIL DELVLFPQELQIDDNEYAYLKAIIFD PDPAKGLSDPGIKRLRSQVQVSL EDYINDRQYDSRGRFGEILLLLPTL QTSITWQMIEQIQFIKLFPMKIDNLLQEM LLGGSPSDAPHAHPLHPLMQEHMGT NVIVANTMPTHLNNGQMSTPETPQSP PGSGSES YKLLPGAVATIVKLSAIP QITTKQEI |
| 3175 | 11226 | A | 4124 | 3 | 1840 | |
| 3176 | 11227 | A | 4125 | 6233 | 6874 | VLIGCIPQVPPSISYSPFLWFSALGNVAE IFCLCLGNHNSCWRTLVVEVPESLCPHC *RLLV*HKSGLVWVLTQMLQLDPAALP CPPSSVDAKGLSDPGIKRLRSQVQVSL EDYINDRQYDSRGRFGEILLLLPTL QTSITWQMIEQIQFIKLFPMKIDNLLQEM LLGGSPSDAPHAHPLHPLMQEHMGT NVIVANTMPTHLNNGQMSTPETPQSP PGSGSES YKLLPGAVATIVKLSAIP QITTKQEI |
| 3177 | 11228 | A | 4126 | 1 | 1481 | GFGVGAQGRAGGRVEAGRMLSKTLA VDMDMADYS AALDPAYTTLEFENVQVLT TMGNDTSPSEGTNLNAPNSLGVSAICA IGDRATGKH Y GASSDCGCKGFFRRSVR KNHMYSCRFSRQCVVDKDRNQCRYC RLKKCFRAGMKKEAVQNERDRISTRSS YEDSSLPSINALQAEVLSRQITSPVSGIN GDIRAKKIASIADYCESMKEQLLVLEW AKYIPAFCEPLDDQVALLRAHAGEHLL GATKRSMVFKDVLLLGNDYIVPRHCPE LAEMSRVSIRILDELVLFPQELQIDDNEY AYLKAIIFDPAKGLSDPGIKRLRSQV QVSL EDYINDRQYDSRGRFGEILLLLPTL QTSITWQMIEQIQFIKLFPMKIDNLLQEM LLGGSPSDAPHAHPLHPLMQEHMGT NVIVANTMPTHLNNGQMCEWPRRGQA ATPETPQSPPGSGSES YKLLPGAVATI VKPLSAIPQITTKQEI |
| 3178 | 11229 | A | 4127 | 602 | 799 | ENPKQENLWSQYFTLISTI*KKKS WLCLVAHACDSSLTGD*GGHIA*AEFETS VGNIVKPPSLY |

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| 3179 | 11230 | A | 4128 | 646 | 1905 | |
| 3180 | 11231 | A | 4129 | 6717 | 7569 | |
| 3181 | 11232 | A | 413 | 160 | 437 | KRDITTSLGQYQONP*SLKKIQLAGY*SG TCLAKSOLRLRLRHQNLNLGGRGQSE QRSCHLHSWGGHSETVSKKKKKRERQO WRQIGTCMP |
| 3182 | 11233 | A | 4130 | 2 | 93 | DFTMSHHYHSAHGT*LVAPRALGNPLSL YPSNYTPFPQHSPPDCTQSYSLPPEYAT HGSSCFDITDGGNLNASRALAGSCAPVSG SLPCCPTLGI*PSPLPHMHKSLPTYPPPTI SMKPP*PCPGSQGPWQSAFTLPI |
| 3183 | 11234 | A | 4131 | 743 | 955 | ESDFT*EYFTHNSCLFCYNKYNINIKLSL NCNNGYNYFLYIVAAHTQT*YIYI*NIFCF CHLLT*FCLGF |
| 3184 | 11235 | A | 4132 | 49 | 313 | PLRIWPC*ALFLKLSLGFSL*FYSSLFL SPPLC*SLPRVQYIYMYLICYICN*YTYI QVCICNGYMYSCWCSNVWYGYTENM RT |
| 3185 | 11236 | A | 4134 | 508 | 780 | VFSFSPSPFPHLSLFFSLSFSPSPSPSS FFTFFGNHL*ISCNPNLMYQWGFYK YYQCIFWLLSDF*LKYNENDMSVAFGLR TSL |
| 3186 | 11237 | A | 4135 | 34 | 329 | DRLKRKNQSLSYLWEYNKKSNCIVTQ SLEREEDDRAEKVVE*IMANFFYLSRD VNLKIQDS*RILNWKLLKSISKYIIDLLE TKDIIRNLESSQR |
| 3187 | 11238 | A | 4136 | 582 | 869 | MCORVQTPKSPSPNYVHSNICTQ*FIAPL SHAKRWKQPKCPSAE*INEM*YIHSMK YDSAIRKNEVLHVTTWKFNENIRLMDK ASHKGLYVA |
| 3188 | 11239 | A | 4137 | 285 | 346 | AVLFYVFHPIYLLVMTLLYFLP*LPNQ RFSLSHKT*TAWPSTTVTLF |
| 3189 | 11240 | A | 4138 | 97 | 298 | DNLTLPRLECGMMAHCSNLNLTSSD PAASAS*VAGITGT*HHAWIFVFLCNWL RNRGVTVKKRS |
| 3190 | 11241 | A | 4139 | 147 | 502 | IFHSKMPISEWKL*TLWQPFKEKIELP FDPAIFLLG*PKLAVVAPQHS |
| 3191 | 11242 | A | 414 | 2 | 150 | WLPSLLEPOLHPSNHHVQGPVAGIDLT YSCVP*IGNRTTPSYVALRPG |
| 3192 | 11243 | A | 4140 | 435 | 660 | NLNQHEKLSMLE*ILKSYPKILDNDNDHE VSHCSKGNFNKRSKEW*WCGTQDSWR LGNLKVGEFEFNDLRTNL |
| 3193 | 11244 | A | 4141 | 293 | 563 | NVWPSSSVRGRNE*GREGGRRTQAAA GLGPAPSDLWWLWLSWCLQKNMSQGG ENLPAGPGSCCGREAGGAGTSLDAPF FEAQLQLH |
| 3194 | 11245 | A | 4142 | 1329 | 1563 | WPRNQPTRRPWLKDKLPGVPGGLTGP PCGQGP*PPPPPLRPSALWSSHSGPPNG EPLPRGE*YLHPSPRRTSYL |
| 3195 | 11246 | A | 4143 | 304 | 589 | RTWWTAAASYFRS*VGGAS*NRFPISGPY EFQLPRGHSRK*GTT*RSRAREPSTLWSTP AAP*RTWWTAAASYFRS*VGGAS*NRFPIS PGPYEFQLPRGHSRK*GTT*EEQSGAIYT VEYACSAVKNLVDSSVYFRSVEGLLKQ AISIRDHNMN*ASQGH |
| 3196 | 11247 | A | 4144 | 131 | 690 | VSPA*VTSSSLWARS*DLAAEGHARCP CSGWAQHL*SNEEADALS*PHTRPIPTTCI* SRTSSRLASTSWPTSH*PWPC*TCGRSMCV RSLPELAQHKADNAALGRS*AREPSTLW STPAAP*RTWWTAAAST*AAWVCSNRP SASGTLNASC*PGPOVAPGDR*PPLP*PSL QGP*SLSCAGE*P*LLAY |
| 3197 | 11248 | C | 4145 | 332 | 421 | MEEKIFSQPGMVAPT*CN*PSTLGGQGRWI T* |
| 3198 | 11249 | A | 4146 | 685 | 929 | KVGGAKPSLGYLRLGLR*PVCLHIS*A GDFPRGV*LLPRRSGSVV*HTCN*PSTLG QOGRQIT*GOEFKTGPVNMVKPHLY |

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| 3199 | 11250 | C | 4147 | 710 | 892 | MCVCAHTCPQTSIYIHVFTHGYDCIQVT AQKCLHMCFFHHMSTHACVDYIYIYH VKLI* |
| 3200 | 11251 | A | 4148 | 98 | 317 | |
| 3201 | 11252 | A | 4149 | 656 | 1037 | FVQVQAHKLACKHVQGAIFYVEKEQQPE GNVFRCCQVST*EHGASSEFWHPGAGA GVTTTSFSSPFGSDRHKFEVSGRRLPTEG LPSNSSFESFPSSIPWFLFPQQLSTIWG LKFQFFGDLKILP |
| 3202 | 11253 | A | 415 | 1 | 1786 | MCLLVITYSSRHVYNNLTBEQKGRVAF SNFLAGDASLQIEPLKPSDEGRY*CKVK NSGRYVWSHVILKVLVRPSKPKCELEGE LTEGSDLTLQCESSGTEPIVYVWQRIRE KEGEDERLPPKSRIDYNHPGRVLNLQNL MSYSGLYQCTAGNEAGKESCVRVTVQ STMPQGTQLQGLDGLTYSYVGVFQQR KSPRLIANDQGNRVTTPSYVFTGH*TG WIGDAAKNQVAMNPNTVFNKRSD LDGRF*MNAVCPVLIMKHVALYVWGE MMLGRFPQGP*KDYKGEDQKAFYPBEGC LLWVPDKD*KEICRSPNLGEEVTVNAV VPAYVFNDSQRQATKDAGTIAGLVLR IINEPTAAAIAYGLDKVGAERNVLIFDL GGGTDFVSLTIEDGIFEVKSTAGDTHLG GEDFDNRMVNHFIAEFKRKHKKDISENK RAVRLRLTACERAKRTLSSSTQASIEIDS LYEGIDFYTSITRARFEELNADLFRGTLD PVEKALRDADKSKQIHDIVLVGGSTRIP KIQKLLQDFNKGELNKSINPDEAVAYG AEMRQDKKELLDPADFLFEEVAFDKK RMGFGGF |
| 3203 | 11254 | A | 4150 | 1365 | 1503 | LKTLQRAGCSAHACNPSTLGGQGRWII* AQEFNTSLGNVAKPCLY |
| 3204 | 11255 | A | 4151 | 397 | 682 | YSKSCCHKAYRMKCOLNVGLSKCCECT EWRDPCELEGQESLWGGVQLAHACNPN TLGGQGRGRIA*GQKFKNLSLNIARPHLF KKRKKISLMRWLK |
| 3205 | 11256 | A | 4152 | 477 | 684 | LYLCSALKKNQ*EPGMVTHAWNPSLTG GKGRRTA*AQEFQTSLSNVGRACLYKIY IFKISQAWWHAFVI |
| 3206 | 11257 | A | 4153 | 108 | 419 | SHTLGGQHGRIMRSVGRDQPGQHGETPS LLKIQKKKKLPGRAGRHL*SQLLRRLRL ENRLNLGGGGGSETIEIPLPPQG*TPR LPSQKQNKLETVSKKKS |
| 3207 | 11258 | A | 4154 | 175 | 190 | DKVRVSQVRLTSLRHLTLR*IRKGRGKK RGCRERNRENRGK*KYV |
| 3208 | 11259 | A | 4156 | 20 | 430 | RPQTYTMVHLTPEEKCAVTALWGKANV DEVGGEALGRLLVYPWTHRVFETPGD YSTPDVAVMGIPNGNADGMNVLASIDG LAHLNLRGTFAITLTHED*DLIIVDFEIL MLGNVLICVLAAHCHGVGEFSWQAA |
| 3209 | 11260 | A | 4157 | 31 | 492 | QRILQSRPFEGRVKQGVTWLQLVGLVS ESHIGPELHLPCSEEECHLLVSGVNSPE DSSPLLTEWLWISHLFLLHCLFGASGR GLQTVPPFYSTALQNVCFQKGIKAPFLL LSCATGGCSAGLRVYKLRSAPSCD*AGR TRGSSGESAPML |
| 3210 | 11261 | A | 4158 | 165 | 433 | GSQQADHPCVGVWRQNSVNPQVFLQAT G*LSASSGSINTNMAQGTAVVCFGPVYP PKAKGRARSQVTPCLTLPKQRLCKILC YLFKL |
| 3211 | 11262 | A | 4159 | 132 | 257 | |
| 3212 | 11263 | A | 416 | 1 | 154 | PQRRVARRRKRAVLPSKA*PENTPSTFTS ASMEWASRSVHLGHSKRFGNLP |

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| 3213 | 11264 | A | 4160 | 2 | 111 | QLLKDSARSTLVL YPCWARVSQSGCCP LKVLSQRPGKGLGLLWVEAWPCGAVA RCLCHPGPLCPASGTFTPVGPTEPHS*LLL RNELPSPLF*LLGQSEPEK WMLPQGAIS ETR |
| 3214 | 11265 | A | 4161 | 3 | 116 | GWRAPTSQPGGAQVPCSSP*KILPGQH WSSTPAGE |
| 3215 | 11266 | A | 4162 | 273 | 793 | DSLLLIQVDTPMPTLHLRSLPSAIRSLI QKKPDIRNTFSMAGGAPTSQGGGAQVLP CSSF*KILPGQHWSSTPAGE*ARKVDAA PSRCYL RDQPKGPFK VPGTEPHS*LLLRN ELPSPLF*LLGQSEPEK WMLPQGAIS SLRDL SKLAQNLTHDCSGTSCPPHCS DSFPYHLAPVLAEIFEIMEKVQWRNPT GSAICPLHRPSQKPACTGLRRK |
| 3216 | 11267 | A | 4164 | 212 | 494 | FSEAQLANVAIKAILSEEISEGKGDRRM LADHTLILTERGSEGPCP*PQEV RPTVLS EWGCKCAQANCECSP*PWP HKSRA GHF PPLSLGKLL |
| 3217 | 11268 | A | 4165 | 281 | 587 | EIFFNPKREYLSLHWMDEHQCPNFIIHV GQGGGLTIIWQDVLQ EYNQKNFLYNISLK DKFLGWWW*LTPIPALWEAEVGGSL PRSSKTS LGNMARSHPHYK |
| 3218 | 11269 | A | 4166 | 113 | 564 | IDRLDSAKIFGHL SIFDRCEKRRFDLVSG TGTCSGSFRRTVPQAPVGRDTSPIPRTH GPNFVP*TLVEKKPPAAW*TPACDLTSK PSIGITILVPTKVEPGSLPTA*DPLEPIQ SPEKK*SIVPQTGSFQTASQLTEAVPELV LV AH |
| 3219 | 11270 | A | 4167 | 1173 | 1432 | PIPVDLNTL MFCYFIYVYHPCLMFMSFT CGLLSL*AQRPSDGYFFFAFIYILFC TMF FLNVQILYSSEKNTVFVDNHSYYTVLR |
| 3220 | 11271 | A | 4168 | 75 | 270 | OYISVVDTYLLMPLRLATAILWITN*WFE KRVAHFYGHWSLMVRDRRISGVDRYYV SKGLENID |
| 3221 | 11272 | A | 4169 | 271 | 825 | SPPACLVDGQQALPSGGGLYPNSLRQGS VGQAQRGCLSWFCMVHANPEDQFLGF QASGFLHLVLPKPPQGAATPSGSSQGGPA MFSGLPSEPTTPATPQNPILHSSITKLLCE AAAFTRGKCTPSSIFQPWHRD DGKGR GFSASGTRGRPHLTPPSVPHQTG*EASQK GPALMPFGFPQPKK |
| 3222 | 11273 | A | 417 | 1 | 893 | PTRPCMAGEKVEKPDTEKKPEAKKIV DAGGKVKKGNL KAKPKKGRPHCSRN PVLLRGIGRYSRSAMYSRKAMYKURKYS AAKSKVEKKKKEKVLATVTKPVGGDKN GGTRVVKLRKMPRYYPTEVPVKLLSH GKKVPSQHVRLRASIVTPGTILITGR HRGKRVRVFLQLASGLLLVTGVLVLRN VPLRRTHQKPVIAATFKIDISNVKIPKHL TDAYFKKKLKRPRHQEGEIFDETEKEY EITEQRKIDQKAVDSQILPKIAIPQLQGY LRSVFALTNGIYPHKLVF |
| 3223 | 11274 | A | 4170 | 1 | 211 | THIPPAEAPGAEGPQ*G*AKHPSAP*APL L/PRRRARASSRPVTSVTPSSGGSFRPGTP AQGVITAVTVSA |
| 3224 | 11275 | A | 4171 | 1 | 424 | NSRVDDFVRPGGSSAAGRQMRGGGQQV PNRPGRGQQP*RNHGVPVSPWALAG DAGGMLWNMMRSWPVSGRFTLNPFNK QSGPRQHEQGPGEEVPDVTPEALPELPP GEPEFRCPERVMDLGLSEDFSRPVGLFP GL |
| 3225 | 11276 | A | 4172 | 1091 | 1421 | RGIITEINKHPDHIHSPTHTCRHIFTNMH AHHTHTPTMYMHTHTGMFW*K*N*GSLNS RSGFK |
| 3226 | 11277 | A | 4173 | 1407 | 1607 | LSDLNGNFHSHKVMTRVNIKNYLNKNM RPGAVAHACNCSTLGGGGQTA*AQEL ETSLGNVVRCLY |

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| 3227 | 11278 | A | 4174 | 1 | 294 | FSRPDHLNGHIKQVHTSERPHKQCVWV GSSGLPPLPEPLPSDLPSWDAQPALWR/ CVFPFG*HRLFPFGSKHPS*KPFGSITLQQ HSDLDPAFISG |
| 3228 | 11279 | A | 4175 | 560 | 824 | FWKVGCLPWELAHPAYLLPFPLGITSFPA LGFPRTGGPWPTFPFPLPRVSRPSQRLG TIPT*SQPHACPLPLPHSGSRSCFHWLV K |
| 3229 | 11280 | A | 4176 | 3 | 325 | FFHVSRLNYFFRYIKHCYFISLILVSGS RVNLLLLGLIVCYCLVVMNF*TWISHF LSFFFFCRDGVSHCVAAALFTPLGKLC WDSRREPPRAEMFLGT |
| 3230 | 11281 | A | 4177 | 292 | 543 | SPGTIAPKRIGKGAGNWKPGVPRFSSM WKETQPLSSRVSKVKLSVSPFPPIPVFP LLPALPK*GHSPLVFSPPHRRSSQGESF |
| 3231 | 11282 | A | 4178 | 3 | 367 | IQMDCVLLFPAQAQISAPPLIMKTITIS WGLEHICPSYPWNHSPSYHRYAMGFG MFFQSGPCSSWAWKLSRTLPSLVVALSS AWPLTRG*RLDLGPPAPSSVYGFSSQASP SPSPAQQC |
| 3232 | 11283 | A | 4179 | 67 | 283 | MCAYIKIDKGNRMCTNMIYLVLEGIVT FSLTLMYKYTKLJIMLSYVKRLTLISCAF YVNLWINLYYAMFI*MCAYIKIDKGNRM YCTNMIYLVLEGIVTFSLLMYKYTKLI MLSYVKRLTLISCAFVYVNLWINLYYAMF IK |
| 3233 | 11284 | A | 418 | 934 | 1272 | WCILGLCTSLMSRTALFPRSHTFFA/RSH SAASKL/EKKKKEKVLATVTKPVGGDKN GGTRVVKLKRMPRYYPTEDVPRKLLSH GKPKFSQHVRLRPSITPGTILILTGRIH RG |
| 3234 | 11285 | A | 4180 | 268 | 467 | GNNRALLRLPALGPPRSSP/DGFTPGTTA RPSILKRCMPMTPLPPDPSAAAPGTSELW TSPDSSSSSR |
| 3235 | 11286 | A | 4181 | 880 | 1200 | GNPTWLFPSYQNGNSGPAEIQS*GFTPGT TARPSILKRSMPMTPLPPDPSAAAPGTSEL WTSPD*QQQQQDGKEAPQSGRHDSSSA LRPAAPALPVSRFPFPLAA |
| 3236 | 11287 | A | 4182 | 343 | 720 | SCLLTVISFHIKKYIYVHTQLTKAGQKE FICRLSLALTNLPPAAPPLAMAPCVSPAS RQDVLG/GPQQPPSGFAPTAQPPA*AR WQLGPPSPGSIPLPREGRSPAPSGAGWG GDLAGPSQVHF |
| 3237 | 11288 | A | 4183 | 789 | 1015 | MSLMVPLMPYPGP*YLPSPAPPYIWE LPLQRDSADVSRRLGGRGVAVERDSPTE KSNISKFLGYVACAVTHL |
| 3238 | 11289 | A | 4184 | 319 | 471 | IMWYIHIMEYI*POKGRKILTHATI*MKL EDIMLSEISQSKNKYCIISVI |
| 3239 | 11290 | A | 4185 | 68 | 422 | GSPSRCPAFLSSPVAARPLTHFTGAGL LRASGEPAQLQTGSVSQ*PPRAPSSCLPL KHSPhQCSAQHSQGEGLGGGTNTTREN* PSPRPLCMGAQAGRMILLPAAVRNHVL ESGSV |
| 3240 | 11291 | A | 4186 | 135 | 500 | PPWVTPRWERGWGVRDITGDRVRSQRQ QQLPKLQSGWEVESWLGPRPRVFPGS VPGTRPSFAAGSQRCFDPARPAHKGPR APGARCGPPFAPPGLPAY*PGRPR/PRP ARR*TPLTAA |

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| 3241 | 11292 | A | 4187 | 365 | 1452 | IGPEVPEGCHFRSGESRGDATLAYRVESE HILGLEGCAGNATLVQGVGRKIPCLGLR GAILGPQIAYRLGSRIMARPAAPGLSQA RSLARRGCPAAGGSQPRCFDARPAHKGP RAPGARCGPPAPPGLPPAY*PGRPRRG LHGGHRSRRPPRRGPAAPGSPAEVAG ASARGRAPGPPCPRRPPPIAPAPVEAG PSARPSVPAAPAPAPSRSPRLQPAPAWG GRASGPKDPGTAPPPIRTQSANRPSRSP PPAPPSPASAGASADDPGTWHRGTGPC QSQTRKHTGP*AARDQQRSSRKDDSPGTG LCHCLRPAGAPKCLKGLWFAFSVHPWSS TPWLQSGRVNLPQAQDIFLL |
| 3242 | 11293 | A | 4188 | 200 | 390 | GPHAKSAFFPP*LSQOLGQG*QPGQTPVG RLLSVAFFPQGVGFPKAGGGTGEAFGG LACPLP |
| 3243 | 11294 | A | 4189 | 805 | 1030 | LVLCPHLSQLTKGTSHTCLTQGLP*KL TRLALFRLGAVAHACNPSTLGGPRGIT* CQEFKTRLANMVKPLLY |
| 3244 | 11295 | A | 419 | 1 | 2607 | MAFAWWPCLILALLSSLAASGPRSPFR LLGVANGIEVYSTKINSKVTSRFAHNVV TMRAVNRADTAKEVSFDVLPKTAFTIN FTLTIDGVITYPGNVKEKEVAKKQYEKA VSQGKTAGLVKASGRKLEKFTVSVNVA AGSKVTFELTYEELLKRHKGYEMYLK VQPKQLVKHFEIIVDIFEPQGISMLDAEA SFITNDLLGSALTCSFGKKGHVSFKPSL DQQRSCPTCTDSSLNGDFTITYDVNRESP GNVQIVNGYFVHFFAPQGLPVPKNVAF VIDISGSMAGRKLEQTKALLRILEDMOE EDYLNFIIFSODVSTWKEHLVQATPENL QEARTFVKSMEDKOMTINNDGLLRGIS MLNKAREEHRIPERSTSIIVMLTDGDANV GESRPEKIQENVRNAIGGKFLYNLGF NNLNYNFLENMALENHGFARRIYEDSD ADLQLQGFIYEEVANPLLTGVEMEYPEN AILDLTQNTYQHFDGSEIVVAGRLVDE DMNSFKADVKGHGATNDLTFTTEEVDMDK EMEKALQERDYIFGNVIERLWAYLTIEQ LLEKRRKNAHGEEKENLTARALDI.SLKY HFVTPLTSMVVTKPEDNEDERAIAADKPG EASYQPPQNPYYVVDGDPHFHQIPEKDD ALCFNIDEAPGTVRLIQDAVTGLTVNG QITGDKRGSPPDKTRKTYFGKLGIANAQ MDFQVEVTTEKITCGTGRASTFSWLDT VTVTQDGLSMMINRKNMVVSFGDGVTF VVVLHVWKKHPVHRDGLFGYVVDVSH RMSAQTHGLLGGFQFPDFKVSIDRPGS DPTKPDATLVVKNHQLVTRGSQKDYRK DASIGTKVVCWFVHNNGELIDGVHITD YIVPNLF |
| 3245 | 11296 | A | 4190 | 90 | 417 | LALAILSYFYLLYLPVWHFGFNSVVVALSL KILNIIVYLFSSFKSLRNFSALVSIFVFCF SSFSACFSLNSKDFP*NPDIEKKPHVKNS RIYKTQYSKDHPORENQFR |
| 3246 | 11297 | A | 4191 | 2 | 672 | GRVGFTPGSWEAFMVKNIVPKLGMCLG ELVINPHQQHMDAFYVWVDWEGMISVSS LVGLLEKHFFPKWLQVLCWSLNSPNYE EITKWYLWGWKSMFSDQVLAHPSVKDKL NEALDVMNRAVGSYVQIAYMQPGIARE NIAVLTHTERRKDFQYDAMHERRAGPOI GLLRLSGKNLKICAKKEPLEIYLWANLK EYLLAKTGQGPFPFFLTRAPEGLITAWA LWG |

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| 3247 | 11298 | A | 4192 | 1642 | 2785 | RMTSSCPMADRTPCLPFSHRLIWEVVMPI FVRNIVTQWQPRNCDDPMVDFLDSWVHHI PVWILDNLQDQIFPKLQKEVENWNP.LTD TVPIHSWIHPWLPLMQARI.EPLYSPIRSK LSSALQKWHPSDSSAKLILQPKWDVFTP GSWEAFMVKNI.VPKLGMCLGELVINPH QQHMDAFYVVIDWEGMISVSSLVGLLE KHFFPKWLQVLCWSLNSPNYEEL/TPK WYLGWKS.MFSDQVLAHSIWSRDKTNE ALDIMNRAVSSTVGAYKOPGARENIAYL THERRKDPQOYEAQERRRRPENMAQRG IGVAASSVPMNFKDLIETKABEHNIVPM PVIGKRHEGKQLYTFGRIVYIDRGVVFV QGEKTWVPTLSQSLIDMAK |
| 3248 | 11299 | A | 4193 | 264 | 638 | PSRTRIKTKOMATSEILPSFVATMDASNF SFWQVLCWSLNSPNYEETKWYLGWK SMFSDQVLAHPSVKDKFNEALDIMNRA VSSNVGK*GFPFWSWTFQVSDFTIHVND TESEFSGSCROPKP |
| 3249 | 11300 | A | 4194 | 2413 | 2707 | EMHVV/WTERRSGRL*SEHGRPRWVDH P/RQEFETQPGQYGDIP.SLLHPLLSCTPS FL.SLFSFLVTFFFSSFLSLFLIYLLSRHDF LACDCFPLFD |
| 3250 | 11301 | A | 4195 | 835 | 1050 | GSR*HNLQIIGRPRADHLRSGV*QDPGQ HGETPVSTRNTRISQAWWTFPIPATQE AEAGESLEPGRWRLW |
| 3251 | 11302 | A | 4196 | 2 | 112 | |
| 3252 | 11303 | A | 4197 | 36 | 172 | |
| 3253 | 11304 | C | 4198 | 1 | 1482 | MVTHACNPTTIGKLEPSYVIRKFLDAQRI HNLTAYLQTLHROSANADHTLLNLC YTKLKDSSKLEEFIKKSESEVHFVETA IKVLROAGYYSHALYLAENHAHHEWYL KIQLEDIKNYQEARLYIGKL.PFEQAESNM KRYGKILMHHPQOTTQLLKGCLTDYRP SLEGRSDREAPGCRANSEEFIFANNPRE LKAFLEHMSEVPQDPSOGIYDTLLLELRL QNWAEHKDPQVKEKLHAEISLLKSGRF CDVPDKALVLCQMHDQDGVGLYLYEQG KLFQOIMHYHMOHEQYRQVSVCEHIG EODPSLWEQALSFYARKEEDCKEYVAA VLKHENKNLMP.LLVQTLAHNSTATL SVIRDYLQKLOKOSQOIAQDELVRVRY REETTRIROEIQELKARVKAMP.PPGKVPR KENLWLQCEWGSCEFVCS.TMEKPFPEHV TOHLQOHLHSGEEEEEEEDDPLENS NKDIRNKSAILPSRNC* |
| 3254 | 11305 | A | 4199 | 913 | 1299 | ELGIVGKHAPFTGAGYHFLGMAAEVL SKFTAVLEGAGTAFPATQHRVVLADCF VFTETDCVLPHADKTTQDCRRNSVPQAT HSAPTDNRKWSGISGMTFRLWKS.RMQG PRS.AWLC*ACSPHCFSVLVW |
| 3255 | 11306 | A | 42 | 1 | 818 | MAGAEGAAGROSELEPVVSLVDVLEED EELNEACAVLGSDSEKCSYSQDKAK VNSGNKYNDNFFGLY.CICKRYPDPDEDE VRELEV.KPGVTKISTEDDGLVRNIDGIGD QEVIRPENGEHQDSTLKEDVPEQGDV REVKVEQNSEPCAGSSSESLDQTVFKNE SLNAESKSOCKLQELKAKQLIKKDDTATY WPLNWRSKLCTCQDCMKMYGDLVLF LTDEYDTVLAYENKGKIAQATDRSDPL MDTLSSMNRVQQVELIC/GIQ*FED |
| 3256 | 11307 | A | 420 | 1 | 1842 | |
| 3257 | 11308 | A | 4200 | 1 | 587 | GAETWEPTDGSASAAQDGVQWCDLGS LQPLPGLKPSHILNLPSSGTAG*RPCAL PGKVPRKENLWLQCEWGSCEFVCS.TME KFFEHTVTOHLQOHLHSGEEEEEEEDD PLEEFSCLWAGMWLLPSGQCLTSSAM SYFHCYHTKLKQWGLQALQSQADLGPC RGRDJAETSIISLTSQWMTTGHILP |

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| | | | | | | IPGISRAGTSSLSLTTSCVWGTTEILR |
| 3258 | 11309 | A | 4201 | 262 | 409 | RSGGRNISRKSITAHRSISAPGSISAQGS1 PALKSILAHGSPSQG*DTPLGWDAPMG* DALEGWDAPLG*DA SRG*DTPMGRDAL SG*YVPSP1PSSWANALPCHFLPMQMFPLT NVMP1NPISAELNCGRGAGWQEWMCPCG LLQAPVPHIHCSPTASRGLRGQLSSQL PETAKAAW |
| 3259 | 11310 | A | 4202 | 729 | 922 | WFETIEATQLYFNELPDTFHCVLCFLHCH FYINVKAFCCCCCCCC*NTCSLIFRPTV YYALML |
| 3260 | 11311 | B | 4203 | 306 | 392 | LTSGETYKSGKAVEEAQPNPPAEDVRD R* |
| 3261 | 11312 | A | 4204 | 965 | 1298 | GNLVTAFOVLVCIPDESLYRSICFLH HQ KLHISVPQSPRWGWSLGLAGTPRCSPL PTPPRLLPQSPRFGATGKIPRDRRT VRPLGHKEPRGT*GKSWPAVAQPPG |
| 3262 | 11313 | A | 4205 | 1 | 324 | |
| 3263 | 11314 | A | 4206 | 310 | 513 | |
| 3264 | 11315 | A | 4207 | 65 | 191 | QEISIMVGFKATDVPPTATVKFLGAGTA ACIADLITPLDTAKVRLQVRG*SLGVL VSTLFPQHRPLKGGQCLEHRDDWRWE GQHAYPCSPYVLAQIQGESQGPVRATA SAQYRGVMTILTMVTRTEGPRSLYNGL VAGLQRQMSFASVRIGLYDSVKQFYTK GSEREYGARV*AGNQHHGWVQGHRC PYCHCEVSWGWHSLHRSHHLSGYSYC |
| 3265 | 11316 | A | 4208 | 12 | 237 | NFKYILFKILHLGEKINNYVYTCFNLFFH CTTYILYNSTINQPKITS*HLNKNLPCK KHSMDGHYKVFVKIFFK |
| 3266 | 11317 | A | 4209 | 361 | 444 | QRLKNNCVITCS*QRPRVFSSPOGLAA CHYRGLRSSPQSRGCLSHFSCQGVHPR SCQRGSASPRITGQRGFTVGTGRTRK RLNTAYLLGAASADILRP1PSTSR |
| 3267 | 11318 | A | 421 | 3 | 377 | |
| 3268 | 11319 | A | 4210 | 89 | 198 | APP*THKWKIPHPTSCDRSLSTCWHITV DSTSLREK |
| 3269 | 11320 | A | 4211 | 119 | 698 | PTLMLHYIPWGRGLGGWGCGQGS RCAGTGCTCLPMGTLMHMEASRQVWG GCILPLPPFYFLPQLPS*LGPSNIWVAKD GWLRLDLLDP*YEWLTGVNVSPGILAY WTVSAPSLGFSGPITDAALPCPNLGGSS PHPRRGRSFQKTGLSLTEGNLPPFPPTP PYLPHLH1RVWPANVEQMRCK |
| 3270 | 11321 | A | 4212 | 728 | 916 | FFFP1SV*KVSAQGS*SLWPGVAHIHYHF SILGGQGGRT*GQEFKTSLGNVRPHLY KSGG |
| 3271 | 11322 | A | 4216 | 162 | 528 | L1PYGLDRGPYGGVWVCGLPYPSGTVST GPPQRTASPLPKQSS/GPQPPEFAACTGT DA1P1DARDAGDAGEGSS/GAEPASSPAG AAGGCGCLAARSQVPS1RSGWLKGS QLASSGALV1CP |
| 3272 | 11323 | A | 4217 | 160 | 835 | GGCGRRTVLVKDYQFFAEGRLLQFRWE NAAARFSA1APDMQRQNF1P1P1YGP GGGGWGTG1SNFRGT1PGGGGPR1A1PSR RV1RGV1RT1RR1RTG1PRS*AR1NGSK1SAK RRQLSRGARFGSPSGGYPGYSRSPAGS QQQFGL1P1RAAADPP1RVL1QGLH1H1LD QQVLEKKECLMSWK1NF1KAFKCLK1P1W GW1PRT1QG1CSGYK1PN1NTAILKHSQAKKE DTFC |

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| 3273 | 11324 | A | 4219 | 198 | 392 | |
| 3274 | 11325 | A | 422 | 1 | 621 | MTKRCLDHRGEWLPAGAGGGGHTGTRC LHHAPVTVWVGIEVDIPEPOGISMLDAEAS FTNDLLGSALTKSFSGKPKVWLRGRHT PKGNLDSEVLGLSPCPIPLAGLTVNGOI TGDGRGSPDSKTRKTYFGKLGIANAQM DFQVEVTEKITLGTGWAISTFSWLDTDTV VTQDG*APLQGLQGGGLQGEDHSGPQP NPGALSEPELV |
| 3275 | 11326 | A | 4220 | 318 | 718 | YHILQGRDIPGNLRVEGSPVHPAVRPRF SASCQQPPFPPLSPHLRARARPRWERQK FTPSLDGSGWGETPAGGCGSHHPWQGP RALFRRSQ*PRR*AHMEGRVGRSPIL HPPWEKTPS*LSGLTRDKQA |
| 3276 | 11327 | A | 4221 | 1 | 563 | ETSSSHFERPYLQFKAEPPLTSRGFVEKS TALHRISAEHPESMMSEVHERALQQHPQ AQGGILLETRKMHADNNFTKQDRLLHA SSDAFSGLRFPQSGTSRGYQRMVPREEI KSTSAKSSVVSADTAPNFRSLNSVTV MEGSPVTLVEVGTGPEPTLTWVWAYN DKP*METNSITEKNHVSSTN |
| 3277 | 11328 | A | 4222 | 366 | 622 | LSTMLHQHLLSVLLKSSQSLVYVYSFFLI QSTLQSGTRVTFLKRLQAGAVAQACN ASTLEG*GGWIARAQEFETNLGNRARC L |
| 3278 | 11329 | A | 4223 | 43 | 245 | |
| 3279 | 11330 | A | 4224 | 634 | 1316 | GSGPHSPGKWMVDDSEHRSRDVRSGR LTLMVTECLSLQEFNSMDLWDFHKYMR SHKAESSELVRNSHTCLYQGEAGAHIM RAIRQRVLRLLRLSPEIVELIEPLQVVRYG EGGHYHAHVDSGFVYP*TICTSKLVAN ESVPFETSCRYMTVLFYLNNTVGGGETV FPVADNITYDEMSLIQDDVDLRDRRHC DKGNLRVKPQQGTSSLLVPTCLMGKV GWVT |
| 3280 | 11331 | A | 4225 | 506 | 708 | FLMRSEFL*KVFPHP*HS*GFPCVCSLS CVG*LLGEGFSTFMTFIRFFPWMCSPDDS GFEIFFLIS |
| 3281 | 11332 | A | 4226 | 1 | 1662 | MHSIDAEEKAFDEIQQCFLMKLTNLKLGID GTYLKHIRAIYDKPTANILNGQKLEAFPL KISTROGCPLSPLLFNIVLEVLARAIQEK EIKCIOLGKEEVKLSLFADDMIVYPENPI VAAQNLKLISNFSKVSQYKINVQKSOAF LYINNROTSEQMSELPFTIASKRRTKYLGI QLTRDVKDLFKENYKPLLSEIKQDITNKW KNIPCSWWGRINIMKMAILPKGIASFTGY CIPKPEVILKLETGKEPWILEEKFRSQSHL EEPSEYNNNGNSFWLNEDLIWHQKIKN WEOPFEYNECGKAFPENSLFLVHKRAYT GQKTKCYTEHGKTCYMSFFITHQOHTPR ENHYECNECGESIFEESILFEHQNVYFES QNLNPTLIQRTHSISNIEYNECGTFFS*D RVSLCLPG*STVARSQLSAASISQVKRSS H/CLCLLSTSDYRCMPCLANLCIFCRDN CAMLPRLVNS*QNKLKLSNFSKVSQY KINVQKSOAFLYINNROTSEQMSELPFTI ASKRRTKYLGIQLTRDVKDLFKENYKPLL SEIKQDITNKWKNIPCSWWGRINIMKMAI LPKGIASFTGYCIPKPEVILKLETGKEPW LEEKFRSQSHLEEPSEYNNNGNSFWLNE DLIWHQKIKNWEOPFEYNECGKAFPEN SLFLVHKRAYTGQKTKCYTEHGKTCYMS FFITHQOHTPRENHYECNECGESIFEESIL FEHQNVYFESQNLNPTLIQRTHSISNIEY NECGTFSEKLALHLOQRTHPGEKPYEC HECGKTFQNTQFTIHLRRHTGEKPFQNE CGKTFHOKLALIVHQRTHQKPYGCNE CGKSFCVKSKLIAHIRTGTGEKPYECNS GGVPALWDERSCGYVSAGTKRAEGEV |

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| | | | | | | WKGGQGEEMGSIVERLVTLSK |
| 3282 | 11333 | C | 4227 | 472 | 681 | MNHKIYVYGHTQOFLYCSYVFKRYEFY SNPTLQGLCSPHSYFYKYLLLTGRNLAI IILNIFAQWYQSL* |
| 3283 | 11334 | A | 4228 | 2 | 277 | RAEIPTAGEVWDGAGPMGAELKPWARQ RKVEMDHVGPLSPPPGRS*SPGPGRGR SRWTMLGPFSPRQAAVRGPRPGVLGSP REALPPGARHPRAVTAAPRELQGCST VRAVAR |
| 3284 | 11335 | A | 4229 | 1 | 240 | ALLGWFFVNLYKEITTTTPSFRRSYILGF VKLYVSEHFFHFFWVLYYFL*MHCEKPY FRRCNAGRRSQIMYIVFLKSLSS |
| 3285 | 11336 | A | 423 | 3 | 2722 | FSDGLCMVALSHLGSALQLGSLCFRSPF RLLGKRSLEPGVANGIEVYSTKINSKVTS RFAHNVTMRAVNRADTAKEVSFDVEL PKTAFITNFTLTIDGVTYPGNVKEKEVAK KQYEKAVSQKKTAGLVKASGRKLEKFT VSVNVAAGSKVTFFELTYEELLKRHKGK YEMYLKVQPKQLVKHFEIEVDIFEPQGIS MLDAEASFITNDLLGSALTCSFSQKKGH VSFKPSLDQQRSCPTCTDSSLNGDFTITY DVNRESPGNVQIVNGYFVHFFAQGLPV VPKNVAFVIDISGSMAGRKLEQTKAELL RILEDKMEEDYLNILFSGDVSTWKEHL VQATPENLQEARTFVKSMEDKGMTNIN DGLLRGISMLNKAREEHRPERSTSIIVM LTDGDANVGESRPEKIENVRNIAIGKGF PLYNLGFGNNLNYNFLENMALENHGFA RRIYEDSDADLQLGIFYEEVANPLTIGV EMEYPENAILDLTQNTYQHIFYDGSIEIV AGRLVDEDMNSFKADVKGHGATNDLTF TEEVDMKEMEKALQERDYIFNGYIERL WAYLTIEQLLEKRNNAHGEEKENLTAR ALDLSLKYPHFVTPITSMVVTKPEDNEDE RAIADKPGEDAEATPVSPAMSYLTSYQP PQNPYYVVDGDPH/FSIQPEKDDALCFN IDEAPGTVLRLIQDAVTGLTVNGQITGJD KRGSPDSKTRKTYFGKTGASPMQMGF PGWEVTTIEKITTLEQARCAFFSWLDTV TVTVQDGHFLASSRRLSMMNRKNM VVS FGDGVTFFVVLHQ/VCWKHPVPTVDF LGFYVVDSHRMSAQTHGLLQGFQFPDF |

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| | | | | | | KVSDIRPGSDPTKPDATLVVKNHOLIVT RGSQKDYRKDASIGTKVVCVFWHNNGE GLIDGVHTDYIVPNLF |
| 3286 | 11337 | A | 4230 | 1508 | 1686 | IFFOPKECLYKNL*GLGAVAHACNPSTL GG*GGWIS*VQEFETSLGNMAKPRLYKK YKN |
| 3287 | 11338 | A | 4231 | 596 | 729 | YFPNKHGILCRVQWLSL*VQPLWESEV GVLLLEKSWRTAWATW |
| 3288 | 11339 | A | 4232 | 1212 | 1344 | ATCLSLEKIQKLLIQNPGR*ASCDSSLL GCSPDLSSHFTVL |
| 3289 | 11340 | A | 4233 | 2 | 114 | |
| 3290 | 11341 | A | 4234 | 1 | 326 | |
| 3291 | 11342 | A | 4235 | 37 | 199 | |
| 3292 | 11343 | A | 4236 | 3 | 263 | |
| 3293 | 11344 | A | 4237 | 164 | 298 | |
| 3294 | 11345 | A | 4238 | 60 | 152 | |
| 3295 | 11346 | C | 4239 | 512 | 805 | MSSLPLMITDQQAVSSGLWIGIPNYRVF TPTGTWVRXPHATESLHKFNLRWEM GLQRRVXTXGTNVKALESAQQPWNQ AGRGDNFFLWRKGGD* |
| 3296 | 11347 | A | 424 | 1168 | 1627 | RAGRGGEHKLNSYGGRRARSQGHLLS SALSPFVSAASYQPPQNPYYVDGDPHFI IQIPEKDDALCFNIDEAPGTGLRLIQDAV TGILTVNGQITGDKRGSPDSKTRKYFG KLGIANAQMDFQVEVTTEKITCGTGRA/ STFSWLDTVTVT |
| 3297 | 11348 | A | 4240 | 1 | 361 | EPRMLYTRYVSDPEFVISRVDFFVLQL FRMSSLPLMITDQQAVSSGLWIGIQS LTQPGSTIS*YCSFFKSVIICHLMIT*YTTS SFFRPGCLASQIPESYPAGTWVRAPHAM EKL |
| 3298 | 11349 | A | 4241 | 545 | 865 | PNNKHPYKSVTILSLCAVLSLYIFNSGH FYFTSSIOFRHLNPKFNLFYQTFVLR1K FL*II*QIKAEPLIVEHK*KIHYKPYLFNT QVLALKLKR*GLYIIS |
| 3299 | 11350 | C | 4242 | 47 | 319 | MVFHKARTRMKERTDTAMQAESAETN KRAHPALPPVLPXGRWRARQQEAPRP HLLSPQSGGGQAPPWRERGVTRLKLG ECCRGR LAP* |

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| 3300 | 11351 | A | 4243 | 211 | 472 | STLGGSLCAQSGCSFEPLPLRGPHPAMPV KCAOPLFSFSPCPCLPRAAREGEQGEHA CWFQMHLLALPYLCVPSWSWLYGTP CF |
| 3301 | 11352 | B | 4244 | 1 | 1023 | MCWAPSTRGGSPALHLLPLLPHPFAR CTGFRAPAVPSSPAGIGHIAVIGSPFFT GGNTSDSFSNGCSQDVGSPLRCGCGLLG VGIWLSVSQGNFATFSFSFSLAANLVI AIGTIVMVTGFLGCLGAIKENKCLLSFFI SPVAELILLILFFVYMDKVNENAKDKLK EGLLLYHTENNVLKNAWNIIQAEHRC CGVTDYTDWLSAGGEHGRPLHGRRT PRAAGATAPRLCGERAAMKRSWGMAFS MTLFOHIHRTGNGHVHLGPKIFASEFGA TDISSGLGDYICDPKEKKYRKPKREPH LQ* |
| 3302 | 11353 | A | 4245 | 630 | 841 | DTGPCWRERGVTRLKLGEGCRGLAP* HLLPPPKSSQCAPLTPTAGWLPKEEAE VCSGCPFCSPSYKP |
| 3303 | 11354 | A | 4246 | 29 | 360 | HSLISQREKESERERARESE**RASERE RERGRDKIPTRKGGEVQFLQTHFFFLIF LTAFFEQYFKERGSYYR YRGGAKKGG RGEEKNSRRNPSRSTGRKKRV |
| 3304 | 11355 | A | 4247 | 253 | 451 | NWSAGAALLSAAPAHTPSPHQARPTPGS PPSAALWGSPPSPSPHPSPTDL*MRPE RHPSSAFF |
| 3305 | 11356 | A | 4248 | 355 | 500 | ARCGGMHLYSQIFGRLRWEHCLR*KVLS QVWWHAPVFAIWEVEVGALLEARSRL L*CAMLLPVNSHGPTWAMQ |
| 3306 | 11357 | C | 4249 | 175 | 387 | |
| 3307 | 11358 | A | 425 | 87 | 508 | MGCPIREGGEGEGLIHKRFVSEAEIADV RKRRRQEEWENVRKPEDPEECPEVYDP RSLYERLQEQRDKQQLRGTVSNCKN MVRGLDEDETNFLDEVSRQQLIEMHR IEFELIELNEYRIALWNVGISYENYEGRG |
| 3308 | 11359 | A | 4250 | 342 | 608 | AGSGTIGMLRPADERGGQSRGRSAHPI SQAAPCPAFLNRPTFGPS/CGPSVTSRLNT AGFCPE/GPGCPPSLAEASCLPSCRAGS HWA |
| 3309 | 11360 | A | 4251 | 56 | 277 | TVSVQRHQAVQSPVVVFTEHIPQDAWCS PSCAPGN*PPLCPTNKPCALQQGMKPL ALKKSLGGTVCOGSKRD |
| 3310 | 11361 | A | 4252 | 235 | 721 | DLADCSLQLQSRSSWKKCSMTLQKVLV PPEAATLSHPTPRPLPHPPALGSLPQPS NTFGP*CCLSQDAPVFPSPVKLHLVTVA SSLANESRKGFSPRVFSRTPAFSSSITSIS DSGIQNTVWSGVRLSVSASSFGLLTSPF SASGVSLSVPLASTL |
| 3311 | 11362 | A | 4253 | 1866 | 2283 | IRILYRSPHLQLPCLTRFLVKKSYSVTGN WMVSLKD*SLRLDCWHGFLNLVKLDEV WQNLGTSTKSL*NNFKNILGKINTFKTL FGGGMKLIPCKVSFSIYLMVNLESHDST WHLQANQTHFIDVSPVLVLEPFKF |
| 3312 | 11363 | A | 4254 | 2 | 767 | ELLFDKSTMRRPFGQKASSLPVIGSRKS KGSNDRHSKSTVGSSDNSSPQPLKRKG KKEDVNSEKLTCLKQNVKLKNSQETIPN SDEGIFKAGAERSETRGAAEVQEDDITO VEVPVDORFAEIVDEEDGEKANKADEQ KEDFSGMNGDI*EEGREATDAPEQVEE ILDHSEQARPARVNGGTDENGELQQ VNNELQLVLDKERKSQGSQSGQDEADV DPQRPPRPEVKITSPEENENNQNKYDA AVA |

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| 3313 | 11364 | A | 4255 | 79 | 928 | TWQRCNLNPLCHIPVLCSLSSTMWDVLL PLDRGDLHLSCIDSSNWALFRQCSKVV YHCVEADSKGLRSVLDELTLNKTNLELK MESQTEKLNLYLRNNHEEAGTQNEFKV SVCQVLSRYGGGGYHYKQSFHKTQSK ELMGRHRLLLTIANRHEIAELRWTLQTL ELELQAQWPLVRMLQO*EP*ERLTC*R* RENQEPVQVVEEQPRANTKETRKSSSF SQPMASSTKESQDGRKKG*LGKGRARE GKMLHQKSLGKEYFEGRGAGPTPSGPT VTOLK |
| 3314 | 11365 | A | 4256 | 235 | 674 | SGKQNNPOATAKAEACTETRSQMGATE TSSTFDYLGATSLKSPHRKVVFCTIET SLHSNSL*LLPLHSISNIQOKTQTSNLNIN LQFATAGPPSQAPPTALSELFGGRSAPEP SHAAFPFARVPPSSGSPRPNARWAARA A |
| 3315 | 11366 | A | 4257 | 60 | 471 | CLGSLQPPPIRVKQFSLPLSFFFFLFF FGLFLRFLSCHR*AV*L*CSLVLFSSCFL CLGFAMVFGSVGL*FSSSLECFQALFLQT FLSPFLFMNSN*PCIRLTEVVPRLSDAL FIFKNSFSCCADAWADAW |
| 3316 | 11367 | A | 4258 | 392 | 517 | MTLKDVVAHACNPNTSGRGGWIT*GQ FKISLANMAKPRLY |
| 3317 | 11368 | A | 4259 | 446 | 767 | IWYKSTHSSVIFKCEFFLQFLSQSLALSPR HECSGAIMAHCSPLSGSSDLPAFLNFS WR*CLHYVAQGLELLGLK*SIPWASE SAGITGLSHHAWPKYELLF |
| 3318 | 11369 | A | 426 | 90 | 549 | QGASQITRSETSCGLIAR*TFGLFVVRIE RIDGNLKMHLHIVEPYVTWGPNLKSVRE LILKRGQAKVKNKTIPLDNTVIEEHLGK FGFICLEDLHLEAFPGKHFEISWFLRPF HLSVAHHATKNRVGFLKEMGTPGYRGE RINQIRQLN |
| 3319 | 11370 | A | 4260 | 119 | 342 | ISICIKININIIYACYVYIHLIRIYLSKYILL ENCI*CTILFYVIFYVYIYLHIYILLRLCPF FIYSWSPV |
| 3320 | 11371 | A | 4261 | 374 | 471 | GKK*KCPHLSHLINPGEKSYLFETSGL NF |
| 3321 | 11372 | A | 4262 | 255 | 496 | LYKFOTSVPLT*FIJALYITFYNSR*RG YYSKFKT*S*RFPMVAHACNPSTLGGRG GRIT*SQEFSETLANVAKPIHY |
| 3322 | 11373 | A | 4263 | 231 | 417 | CELPVTRHGAGCVSSDTVLP*PCFSPV SQSPSVCLSPFSDPCEPPYVLESPLDC SF |
| 3323 | 11374 | A | 4264 | 1204 | 1398 | ASFLAISMSVVRVGVPFYHFLFRQSLIL SPRLVGVR*CDRG*QLPLPGYK*FSCLG LPSSWDF |
| 3324 | 11375 | A | 4265 | 581 | 705 | LLAECGAHACIPSTLGDQGRQIT*GQEFE TSLANVVKPCLY |
| 3325 | 11376 | A | 4266 | 3840 | 4074 | AQEYRGQLRQYSETMSLKQKFKNRSAG CGATCL*SQLLRRLGWEDHLSPGGRGCS EP*SHHCSPAWVTEQDLSPCHP |
| 3326 | 11377 | A | 4267 | 173 | 421 | |
| 3327 | 11378 | A | 4268 | 423 | 595 | SCLSNFHLGQAQWLMFVIPALWEAKVG RSP*VRMVISI*FRDLPASASQSAFNISH |

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| 3328 | 11379 | B | 4269 | 1 | 1224 | MPTVGKAQARRTRDTLLDITQVLIDQ SPRKDTGLAQOTGVVPSKGVKYWRAQ LKGDMMKYASPAFELFYFSVRAQSTDGIV TLLDPTTREDCISSAPNPEVTRQRAEV AGVGLLAVKVPDEEGVLGGAPGPQKR SRVCGEPTLQRRSGPLVARPGSRCPPT SVSSPVPDEYGRITVVMRLDNPGISGRT IENNPELEKQLGEPSENSPYLGPPOVL LLRDPREDVMLLNQPTTAEKQAVLQ AAEIFRNEQOISYNTSGKKGDRECEIA ETPFQIGSEAVPLDNPWNSSSSAGWEK RRHFIICILEGLERTKAKFLNCSKLSMVD QKPDENPAAFMERLREALIEQTSLSPDSV EKQLILKDKFVTQSSASNNRKLQKQAI ISTLKNLLK* |
| 3329 | 11380 | A | 427 | 215 | 870 | RAPPNGLTDOQKKGKGLRFRKLESFLHD SWRQKRDKVRLRRLVVKPHALPLDKH SLAFVVRIERIDGVSLLVQRTIARLRLKKI FSGVFVKVTPHNLKMLRIVEPYVTWGP NLKSVRELILKRGQAKVKNKTITLRIJ/S Q*WRSTWGKFGVICLEDLIEIAFPQKH QEISWFLCPFHRLSGPSCYQK*SGLPQGD GHTWAIGVNASNLQIRQLN |
| 3330 | 11381 | A | 4270 | 1016 | 1393 | IFQLGEYIFLFLFSVFEMESHVYTAGVQ WCNLSLQPLPRFK*FSLCLSPSSWDYR QMPPLCANFCISRDGVSQWPGWSQIP DLKRSAGHLGLPKCWDYRRETTAPSMFL QNLLALVPMQQR |
| 3331 | 11382 | A | 4271 | 825 | 1246 | RAEGPCPNWCCQSNILPCHDPGSRSQAS DWACHLWGQSGSGQNGHVPAFGDAL QLPGNTSRVGAQGGSGRGKRDGPGNS H*AHGTGWRECYGDRSRJRNRFWHL APPRSEIFLILACTLRNSGASCPSPCFDS SFLRVPRTRGRFVGSTWGVTPGI |
| 3332 | 11383 | C | 4272 | 442 | 522 | MRCASPSTSEKFSALLQWCWLQDLG* |
| 3333 | 11384 | A | 4273 | 322 | 1025 | PLLCVLLAPPEGAVGDICKEDAGNMPS TSEGSYLEMAHFLRNKLAGSSVRKPD GFLWEGALRAWNSMAAPSGGVNCEEFA EFQELLKVMRPIDDRIVHELNITVTPSF AGKIDASQTKQLYESLMAAHSRDRV QKNCIAQTSVVKNLREERKLNLDLTL LKPT*EKSRSQ*KWVQSELNVVEVVNDR SWKVFNERCPSNLQASKE*IKRDSFFFF FLRTGSSHKS |
| 3334 | 11385 | A | 4274 | 22 | 54 | |
| 3335 | 11386 | A | 4275 | 506 | 622 | TRDSAHAYNPSTLGG*GGRIA*VQEFKT TRAHSYTLIPT |
| 3336 | 11387 | A | 4276 | 296 | 495 | KHVRPVTHTSLGGKDFLIEKILWLGIVA HACNPSTFRGGQGRTA*A*EFKTSLONIV RPLCYLKT |
| 3337 | 11388 | A | 4277 | 270 | 558 | FWIFLRSFYVIRKHLJGHFHPWPRVLKC* KHGGWKVHGGPGQ*QKGTGKEGRKG LRORRELTEGARPLFSSGQVESTQIVPLP QPPYVGAAS |
| 3338 | 11389 | A | 4278 | 51 | 113 | |
| 3339 | 11390 | A | 4279 | 179 | 387 | ILVGFCCLFPPPSNKK**THTHTHTHPH THPVVTNRISLQICRKGKQKTSQGPFTA TSLSPSDSAV |
| 3340 | 11391 | A | 428 | 476 | 821 | TFTWPLFVRIERIDGVSFTWCREPLQDFA LRKIFSGVFCCKGTPQDSKMLRIVEPYVT WGFPNLKSVRELILKRGQA/KVKNKTPL TDNTVIEEHLGECYSLGVSWGRKPGSLK L |
| 3341 | 11392 | A | 4280 | 464 | 596 | EFSPGMGAYTRSPSTLEHSGQIT*AQEL ETSLANRVRPCSYM |
| 3342 | 11393 | A | 4281 | 468 | 564 | YAFVRTQVPGGIRLV*CRRLRVLSNLIK KQS |
| 3343 | 11394 | A | 4282 | 780 | 837 | |

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| 3344 | 11395 | A | 4283 | 993 | 1050 | |
| 3345 | 11396 | A | 4284 | 175 | 387 | HFGEAEAGWITRSGDRDHPG*NDETPSL LKIQNISRAWQAPVVSATPEAEAGEW HEPQEARACSEAEFEP |
| 3346 | 11397 | A | 4285 | 161 | 409 | PPGVYIYLFVKVRLIWGNVMTV*VYMTL LSFPYQICITYIKYVYILPI*NIYIYTHIC IYIPLFLCLLJLAIKEGAANV |
| 3347 | 11398 | A | 4286 | 1910 | 2120 | SVSGFWLEAMLPSELGQPCRLQPFIGN KSLTGWVAHACNPSTLGG*GKWIT*AHE FQTSLANMMKPCLY |
| 3348 | 11399 | A | 4287 | 1156 | 1320 | KNSS*FFYFLSYLKNKNRPAVAHTFNP NTLGGGWIT*YQEFETSLANIGKPCLY |
| 3349 | 11400 | A | 4288 | 1497 | 1767 | PSASPPQVPIPALPQWTGPGQRNPL*CLH IGLCSPPQSDGPWRKACSLFQVPSHQCG RIRKKINKVHICVFTASRVKWKPKPAAA NDQL |
| 3350 | 11401 | C | 4289 | 1434 | 1655 | MKKFSLHKKKFFCTLVPIIMKLMLNKL SQCKTEGKYCTLAENLFHKKHCFPS DHRSHFSLAVVKKL* |
| 3351 | 11402 | A | 429 | 33 | 370 | ATRSRLGKHTRRSKSAIQAVRIISQVLR CKORCMHCRTPIATLQEHKSVNNPSAQ QRTKTWSIHTPAPHPPAPHSTHQ/HPH PST/PAPHSTHQLHHPHTSISSIRTRG |
| 3352 | 11403 | A | 4290 | 275 | 485 | TNWKLSCEKLYSTHCTDHKAVLFF*C LSCFVLLCVLFICVLFVGRFLSFCVFVT SVISTSFLLAVS |
| 3353 | 11404 | A | 4291 | 889 | 1199 | KKCVCCVCCVCKC*LLKLMVLGNFRA LWGSSEWFLHHHLSSTNRKMLSLQGHV |
| 3354 | 11405 | A | 4292 | 502 | 768 | SPCDQTPVEEGMLPKFRKSLQGSFNPH DILILPSQK*FCIRGSKTYIWPVGTVSHTC NPSTLGGQGGWIT*DQEFETSLANKVKP RLY |
| 3355 | 11406 | A | 4293 | 3 | 309 | IFGRDGFHHVGOAGLD*TPDLK*STHLG LPKCWDYRHEPCLARRYFKNNKKDN LLSHHTKTTVNILPIFSSCTDVLHNHD VECNVFSLLDVNIFQSC |
| 3356 | 11407 | A | 4294 | 204 | 317 | |
| 3357 | 11408 | A | 4295 | 1905 | 2032 | VKHLDTGQK*GCNAFNVGQSGPGPDAA PRWASRTPGGVNAGI |
| 3358 | 11409 | A | 4296 | 2 | 225 | KWQVTWLSFCSTFMSPSSWSSCS/PPCSA QPYPAPVSCDGPPIRFPPEPLD*GRLKTY FPPPCVNWGCWGQCVISQ |
| 3359 | 11410 | A | 4297 | 299 | 663 | IAHITEIRNLILHSNNPFWLEPTRIEFSP RGKVTSLHPRVKKMSPPSKNHPPEEV GSASSFLREPSGQSGSHSPYAPSIDAM VPPYRVPTPGIKEDLTKPLFWGITFL PCV |
| 3360 | 11411 | A | 4298 | 1 | 406 | MDWEGSLPLVFNRYCRDASLIHPFRKGV RPRRDACLQSPSLAASPFLGKGQTITDA ELRVTLTVEDSARLHPGEINSHVAHTKP VWWSLHTDARETHLQRTHFQOSWL CIRP/MNPAKSTVSSVRTQT*APLP |
| 3361 | 11412 | A | 4299 | 236 | 768 | VPCRESRALALPRKEMMRA*NONKTK HDSRHCRIISPVGNDIAENNYNSFKAE LPNSSASTPPYNIPLFIASPPHTCSGLQFH STITDAELRVTLTVEGNRMSVVRSSFLGL NQLKLAKSMMAAYSIFEELASLYSNFH TK |
| 3362 | 11413 | A | 43 | 46 | 511 | QLRMAGAEAGAGRQSELEPPVSVLVDVL EEDLELENEACAVLGGSESEKCSYQGS VKRQALYACSTCTPEGEAPAGICLACS YCHQSHKLFELYTKRIFCDGNSKFN FGMQLP*QSK/DVNSGNKYNDNFGLY CICKRPYPDFPEIDE |
| 3363 | 11414 | A | 430 | 42 | 334 | |

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| 3364 | 11415 | A | 4300 | 302 | 897 | SVAKEGVVEVSHTCGLKWGDIRGGCE GGFGLGEKAAMRCGSPGIVREADNLV KVSPPSVLIKKGTDLFSTVRVTRRSASV MVLTMPLAPATFLRGNCWAGGGGLVTE *NCKPDQV*GGEMIKGL*GGG/VRGCGRI ET*LGLARRSLGRRGEVRLVWRSGTLLP KYCAFTVFTTARPGDPLPCLAQWVPCP WSLAHC |
| 3365 | 11416 | A | 4301 | 111 | 275 | SRNETESRTRCEEGR**KDVRVEEQRLR KNWDLARPGEQLPAFQSGNLSRQLH |
| 3366 | 11417 | A | 4302 | 3 | 220 | SLQPLSREDLGRSQSESLGPEFQGLWEW LPGLNPSICSGVPHRWDA*EESWAAG SPWPGQISGTSKLL |
| 3367 | 11418 | A | 4303 | 2 | 347 | LTMLAPATFLRGNCWAGGGGLVTE*N CKPDQV*GGEMIKGL*GGG/VRGCGRIET *LGLARRSLGRRGEVRLVWRSGTLLPKY CAFTVFTTARPGDPLPCLAQWVPCPWS LAHC |
| 3368 | 11419 | A | 4304 | 2 | 265 | |
| 3369 | 11420 | A | 4305 | 3 | 865 | |
| 3370 | 11421 | A | 4306 | 288 | 597 | TDFSVRCKGCRGTGPFRLIFQDRIVGVEL IAV/C*RHGPRFSSCRLLSCRRPFDKTCRL MCHQRLSGFPQEQTORDSRCLQLFRQR FAAASCPTHOVILLTOYF |
| 3371 | 11422 | A | 4307 | 3 | 188 | KPRRSSESGLPEFQGLWECLPGLNPSI SSGVPQRWDTA*EESWAAGIPWPGQID FWHL |
| 3372 | 11423 | A | 4308 | 498 | 803 | HLGPEFOGLWEWLPGLNPSISSGVRRH WDVA*EESWAAGIPWPGQISGTSKLL EEVLEELGLAAAVQAFQSSCVLEMWLG FVSQWRQGIATFFYYCTP |
| 3373 | 11424 | A | 4309 | 3 | 338 | KPRRSKSESGLPEFQGLWEWLPGLD SPISSGVPHRWDA*EESWAAGIPWPG QISGTSKLLGEEVLEHLAAAVQAFQSS CVLEMWLG FVSQWRQGIATFFYYCTP |
| 3374 | 11425 | A | 431 | 55 | 1078 | SERRRGPLCLPDSVLDGSPMPYCGIAE PSLRRWDPQRSPLASCRLLGCLAIRH PNFRPPIASSILQIKMATAAAAAVMA PPGCGSCPNFVAVVCSFLERYGPLDLPE LPFPELRLVQAPPDVGNGEVPKELVEL HLKLMRKIGKSVTADRWEKYLKICQEF NSTWAWEMEKKGYLEMSVECKLALLK YLCECQFDDNLKFKNIINEEDADTMRQ PIGRDKDGLMYWYQLDQDHNVRMYIEE QDDQDGGSSWKICVRNRNELAETLALK AQIDPVLKNSSQDNDSSRESPEDEET KKEEETPKQEEQKESEKMKSEEPMDLE NRS |
| 3375 | 11426 | C | 4310 | 321 | 734 | MIKHQGAFAFPVDRRRQSFVSTDKTCLL CLSQMKGIEIKRRERLKSKEKVWLRD RERLEKRTILRASVFKGEKPAAGERGKV WSCDSIHVLQEGSRPQISVLCLNHRKY SPRFSVWSLKPSPMKLEVRRCQR* |
| 3376 | 11427 | A | 4311 | 867 | 1111 | RHCYRGT/ARCRSANAGAMILTMKQL AIVMRVYQHQRVRRMRPRGNARGSGMS AVGAYYSSCIRVMTALQSCTDGDEAVL L |
| 3377 | 11428 | A | 4312 | 1 | 560 | |
| 3378 | 11429 | A | 4313 | 2 | 268 | |
| 3379 | 11430 | A | 4314 | 11 | 783 | NLFLRPQKDQTYWHIRLQYTKHLLKEL KYTYLLYATISF*DV*RHC/RSAIAEAK ETKETHFIRGPKTLAPVTDWEGSLPVFN QCRDASLIHPRFKGFRPRRDACLGPSPL AASPAFLKGGRQLKTDIARLPWKPPDH HRRRASGNSHSGRVQPSRLPSWAHVEC LRLFQEHGASCQWIYRSIGWRTVFMFC VRVKRPPNRLCVSNMAVYFTVQVQHYHP LYENNNKTLRALRMIHVESLACGVRESS |

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| | | | | | | TNDNYY |
| 3380 | 11431 | A | 4315 | 177 | 434 | LCLWLQPPF*E*IAGQVGE*SRNETYSR TQCEGR**KDYRVEEQR.RKNWDLAR PGEEQLVPSSEKRD.LPLRVKQDGRCPV V |
| 3381 | 11432 | A | 4316 | 1332 | 1602 | |
| 3382 | 11433 | A | 4317 | 797 | 954 | |
| 3383 | 11434 | A | 4318 | 1 | 817 | |
| 3384 | 11435 | A | 4319 | 3 | 93 | LSPS*AIISPVPCTYTPRWPEATEDPQKK |
| 3385 | 11436 | A | 432 | 1 | 568 | |
| 3386 | 11437 | A | 4320 | 874 | 1114 | ESLGAQAEDYCRSGALTESLY*SSSKRK CGVGVPKQSLLYSTV*WSCGRGSLSRP QNDRASSFQOQYEKSTEAKLPKGL |
| 3387 | 11438 | A | 4321 | 264 | 1259 | GDRWEGKKEDLGRVALGTETRKGLMC KRMPGH/AGTSDHLSILQELFRSCRM KLK/RAI/CPAIWNYCRVIGVKRHCRRK *DA*ILQDLNNSCPKIDKWSEVPDVQAF YTSVPS |
| 3388 | 11439 | A | 4322 | 607 | 769 | SQVLRPTQPKHELANFKSEDRSVRLSPS *AIKSPVTCCTSR*PEATEDPQKK |
| 3389 | 11440 | A | 4323 | 495 | 658 | GLTGTWHAHAFTHWLVLVLSHSTELSG ERLCGPAELGTFTLWLF*RKFPADHWP |
| 3390 | 11441 | C | 4324 | 218 | 352 | |
| 3391 | 11442 | A | 4325 | 444 | 994 | PMTHPFFPPAEVHEPNQRQALVLPVSQ ARWTASSLFSWVSASTSPQLEELQST QTWHSFATCSQQPSRCVETVDPSSLTQ QGLAFSAPTGRQAQRCARMANWNGDP LPSPSVHPTCTHCP*GPPQPPSASTPWG SCCSRWHGQAILGCDRRCRGTCSSRP WLFLCLLPFFDKWS |
| 3392 | 11443 | C | 4326 | 296 | 625 | MVSEGHTSPLAKSSASELHRTSWSTDNG MDFWRECQFRAKEIQGENEALNKSSKR AQKLVSDLNMRQVRRKYVNAAGSLH FILSLSSIHLKTAFCVLLQGNLYTL* |
| 3393 | 11444 | A | 4327 | 221 | 344 | KVLSDFCSVPFCVVCVVCVVCVVCV LTLL*NSSIYYGH |
| 3394 | 11445 | A | 4328 | 441 | 656 | AHNYTYFQRYHIHQITYDTGRGMRIGMR DQKKRPGTVAIHCNPSTMGG*CRKTSQ GQEFKTRLNSTVRPNL |
| 3395 | 11446 | A | 4329 | 409 | 749 | RRGRERKRTHIHTHTHTANLFSVFLY FLSFLHLCALCL*SWM*RCSANPILPTG YASQTFMILPSCTTVISLPCHWLLFPQYS QTLYSLFTELNGQITVTSAKITYTSKI |
| 3396 | 11447 | A | 433 | 1 | 572 | ANNSPALTGNSSQPOHQAAAAAQQQQ CGGGGATKPAVSGQGNVPLWGNKKT MNLNPMILTNISSPYFKVQLYELKTYHE VVDEIYFKVTHVEFWEGSKRKTAGTQG MCGGVRGVGTGGIVSTAFCLLYKFLTK LTRQVMGLTHTIDSPYIRALGFMYIRYT QPPKDLWDWFESFLDDEEVCOQG |
| 3397 | 11448 | A | 4330 | 1682 | 2410 | LNKGGQTDIASSQTCLVGHVESDGAHLT IMIGPNEPAFLSPENNNCPWQERERTII QKKKMNGMHTHRRNEAETIAGILTVQE LFPRTNLSLTVIDVHSHSVLFTTITQVLISQ VNHLIYPLPQAFKFPVFIITSTGLLFTYV RVVMYNFVISYNGKKKNQNI*KVICTELY FSSFLKMICMVRKRRGQPGEGRASRELC TFYTFVLCTALLIHPIMILLEPICKKLLR |

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| | | | | | | KFICVYVNNIT |
| 3398 | 11449 | A | 4331 | 2 | 57 | |
| 3399 | 11450 | A | 4332 | 19 | 192 | |
| 3400 | 11451 | C | 4333 | 218 | 364 | MTRVSSCSFSLATDRSFTTHKGNIVSSNS KIISLTWMGFELKTOHKI* |
| 3401 | 11452 | A | 4334 | 172 | 304 | PSPVFLAPGGVVRAGNSLYPRGPFGH*PRF GPPPPRGTREPPF |
| 3402 | 11453 | A | 4335 | 258 | 509 | RGHSKQQRDIPRVLHLMNFSFKIVTV RSLYSFI*KQAQVKLFHLHPPISSHTHTH THHTKPTLLTKPSDDSWVFRWC |
| 3403 | 11454 | A | 4336 | 1 | 2411 | MSFLGILCKCPLQNESQEEYSNAYPLPA VKVSMDWLRLRPRVFOEAVVDEROYIW PWLISLLNSFHPHEEDLSSISATPLPEEFE LQGFALRPSFRNLDFSKGHOGITGDKE GOQRIRQORLISIGKWADNQPLIQCE NEVGKLLFITEPELILEDPSSEAKENLLOE TSVIESLAADGSPGLKSVLSTSRNLSNNC DTGEKPVVTFKENIKTREVNRDQGRSEF PKEVRDYSGKITVTKNDGKDNKRRK TETKKCTLEKLOETGKQNVAVQVKSQT ELRKTVPSEARKTPVTQTPTQASNSQFPI HHPGAFFPLPSRPGFPPTTYVIPPVAFSM GSGYTPFAGVSPVGTFLTQTAHSPAGNQ VQAGKOSHIPYSQQRPSGPGMNQGPQO SQPPSQOPLTSLPAQPTAQTSTOLQVQAL TQOQSQPTKAVPALGKSPPHSGFQQYQ QADASKQLWNPPQVQGLKIMPVKQP YYLQTQDPIKLFEPSLQPPVMQQOLEK KMKPFPMEPYNHMPSEVKVPEFYWDSS YSMADNRVMAQQANIDRRGKRSPIGIF RPEQDPVPRMPFEKSLLEKPSMLSHSSS FLSLTGFSLNQERYPNNSMFNEVYGNL TSSSKAELSPSMAPOETSLYSLFEGTPWS PSLPASSDHSTPASQSPHSSNPSLSPSPPT HNHNSVPFSNFGPIGTPHNRDRRTADR WKITDKPAMGGFGIDYLSATSFSESSWH QASTVPSGTWTGHGSPMEDSSAVLMESL KSIWSSSMHHPGPSALEQLLMQKQKQK QRQCGTMMNPPH |
| 3404 | 11455 | A | 4337 | 17 | 300 | TFKYYRNLNLFILKKSXYMATFFHLYI YASFLVLTEIFYIHSKELLPVHYQVYF PCFFLGY*FIYLSKKNPPYNLFILLPFYNF NN |
| 3405 | 11456 | A | 4338 | 257 | 476 | KAQMSLDLTHPVWLCLKLGAV*V KL*EYF*ICNICIAICVCGVLCIYVTCM VCVRAIERKLEPELS |
| 3406 | 11457 | A | 4339 | 283 | 494 | GQRCEPPLPFSFG*DSG*EPFPPFAQKA GGPASPSGPPGPH*DPGTGASEWKMAT MGNRPPEMVSA |
| 3407 | 11458 | A | 434 | 6 | 223 | TVTNFGISGTIAIEMDEBGTYIHALDNGL FTLGAPHK/ERIALKSGYGYLINSDEL VGHSDAIGPREQWEH |
| 3408 | 11459 | A | 4340 | 766 | 1083 | FKHFGPFHKLHMLVFKIQNVLFKDGNT FEVRRGGSRLSSQHFRPRRADCLMSSV V*SQPGCQGETLSLKNKTKISQA*WHVP VVQATWEAELGGSLERRLRLQ |
| 3409 | 11460 | A | 4341 | 2 | 163 | FVFFVETGFHYVGGTGLELLTS*ARLGL PKCWDYRHEPPRPAYVEYFYSALL |
| 3410 | 11461 | A | 4342 | 192 | 440 | ATVWEEPPCSPPPIPRARFWGRPPCESS RGQKPKFPAYMSPPDARWPAWLPSSIPT |

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| | | | | | YD*T |
| 3411 | 11462 | A | 4343 | 1875 | 2210 |
| | | | | | PLSQVITGKHQKRKRHLSECKFERPEKFPQ SKHKRKKSYEDTDLDKDKSIRQKRKREED RVKVSQGLKHRRKKKSP*YPPRKKN VSTGKRKRNLKKGGQKRCKGMSLFLG F |
| 3412 | 11463 | C | 4344 | 217 | 396 |
| | | | | | MSEETAKEVMRAYLQQLRQETGLRLCE KVDFDPQNDKPSKWWTCFVKRQFMNKS SXPGQ* |
| 3413 | 11464 | A | 4345 | 1 | 546 |
| 3414 | 11465 | A | 4346 | 216 | 324 |
| | | | | | VFFPSL*NEADRTLITYITLYISECLKKLQK VIKLG |
| 3415 | 11466 | A | 4347 | 71 | 650 |
| | | | | | NPGAAKMPAYHISLMDPDTKLIGNMAL LPIRSQFKGPAPRETKDITDVEAIYYFK ANVVFQNYEIKNEADRTLITYITLYISEC LKETAKEGNSKKPKVEERKCFILGHIH*FF PFPGEPPGFPL*QQFFAKPANKQDEVM RAYLQQLRQETGLRLCEKVDFDPQNDKPS KWWTCFVKRQFMNKSLSGPGQ |
| 3416 | 11467 | A | 4348 | 552 | 872 |
| | | | | | SGPNCCCEADAQLAEEGNSASHTSFTV* VRPRRACHACNPSTLGG*GGRIA*SQEFE TNLGNTVPRCRNSGEVLNRKTVSIRRAL RVFSPLHTARLHPAAAAARAARA |
| 3417 | 11468 | A | 4349 | 199 | 375 |
| | | | | | FSLGGIPPFHRRGNWVSREWPGTVAHFT NPSTLEGRGRWIT*QQEFETSLTNMVKI CLY |
| 3418 | 11469 | A | 435 | 3 | 685 |
| | | | | | RTQSGNVYFASTSVPPRPGAAPGHILVLS RLQPLRAEVSRSRLRLVEYSYVTKTLV FKGTAKSKKKKSKDKK*QREDEETQL DIVGIWVTVTNFGEISGTIAEMDKGTIYI HALDNLGFTLGAPHKEVDEGSPFEQFT AVKLSDSRIALKSGYGYKYLGINSDGLVV GRSDAIGPREQWEPVFKVMGMALSTSN SCFIRIHEADIEAKSKTAGEEEMIKIRS |
| 3419 | 11470 | A | 4350 | 368 | 546 |
| 3420 | 11471 | A | 4351 | 2 | 211 |
| | | | | | YVYIYKIGIESRVSRAICTPSMAALVDKR WKKPKCPLMYEWINKM*YTHTEYYTE *KRKYCSTLSHATI |
| 3421 | 11472 | A | 4352 | 1 | 676 |
| | | | | | PK*WGFLPLIYKKGKGGGTWGGDVLP SPSLGQGGGKGWPKREGGRDLGAERK AGKCREKWKQSKMKGRSRKTGGERVK KPEKHQDTGLFPFQIGGGGLRLSRVCVP QPQVGRGSVSLAQLSCTSSD |
| 3422 | 11473 | A | 4353 | 1029 | 1252 |
| | | | | | CKFVYSSLLFIYSSFFCLIFLFPAPVLIYP LAH*LCKPCSSYMSWVNIQYSIYFRHKC FRNIVQKILYSISIM |
| 3423 | 11474 | A | 4354 | 299 | 561 |
| | | | | | FPSWORDAQASLTSPAPLIYPKATPFRKR PFRRLWNKGLIQLTQRLTYVAHTCN PSTLGG*GRQMTWGQKFKTSLANMVKP RLY |
| 3424 | 11475 | A | 4355 | 17 | 195 |
| | | | | | FMDAQVTFKLYIYIYTYVCTYMIYIYTY V*MCEYLFYIYIYIYMYI*MHYTYTISL TP |
| 3425 | 11476 | A | 4356 | 3 | 565 |
| 3426 | 11477 | A | 4357 | 1 | 597 |
| 3427 | 11478 | A | 4358 | 1 | 567 |
| 3428 | 11479 | A | 4359 | 1596 | 12368 |
| 3429 | 11480 | A | 436 | 115 | 662 |
| | | | | | AGFSLSAQKSPGAMA*YSYVKKSKLVK GTSKKKKKSKKKRKEEDEETQDF/IVI W*TVTNFDEISGTIAEMDEGTIYHALDN GLFTLGAPHK/ERIALKSGYGYKLGINS ELVV/GRSDAIGPREQWEPVFNQACAA VFTVIGSEKQSECSLLRESRAKYHGCTH GOISSILKQHPRWMY |

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| 3430 | 11481 | A | 4360 | 48 | 436 | RTGSSSGLSISATCLISQRRYSEDCWNVY SLVRSG*ERGS*LLSTYYVLGSLPDVFTY INSFQKTYLK*MGPGMVVHAWNPSLTLG G*GRRTA*GRELETSLSNIVRPLCNNNNN NNNSNNEVNGIRKEG |
| 3431 | 11482 | A | 4361 | 2 | 2551 | |
| 3432 | 11483 | A | 4362 | 322 | 1288 | RKNWGLRKIPWSSLKQEONLPESFGSKK AFFGSTWRKKDGEPEFGSLGCLPLKAR PLLSQLPLLRAISTRKPGQTWKNKHEHL SDREFVFKPEPQQVVRRAPEPRVIDREGV YEISLSPTGVSRVCLYPGFVDVKEADWIL EQLQODVPWKQRTGIREDITYHQRLTA WYGELPYTYSRITMEPNHWHIVLGLT* NRIEENTGHTFNSLLCNLYRNEKDSVDW HSDDEPSLGRCPHIASLFSGATRTFEMRK KPPPEENGDYTTYVERVKIPLDHGTLLIME GATQADWQHRSAQKNTTLREPRVNLTF RTVYDPRGAPW |
| 3433 | 11484 | A | 4363 | 249 | 906 | RIHFPRVQSPQSBNPKFAVASRGFFSLSL SAQDPLPPPLGEALLSLHPVPRSTET VAGDSSELQLGLRSPQQLAGLAFLARL FLLEFPB*RCCKSP*NDRRSSVDSQIHL VGRESAHLAOLRVCVSLPILARCFOQV LQGVPLGWPSFGS/AGVSCRRREERH MGVVMRVVRVEARVSS*ESKI/SRALR'S TILGLPKCWDYRREPPCAH |
| 3434 | 11485 | A | 4364 | 843 | 1186 | QHSTKNSGGWAQIPYGGSSQISVCVYIHT YIHIIFFFFFLVETESHVTAQGVQWHN LSSL*PPPGFKRFFCSLPSWDYRRTPP HFANFCISRDGVSPYWPWGSRTPDLR |
| 3435 | 11486 | A | 4365 | 127 | 601 | NLILNVTWPTOLAKQERLHLRLKTSVV WVVRKEKPTRPRLGAVSHCPQLLILQL VLSPSTSKTLP*EPDSESP*PKRGKPSW GRTOAPNLHSPFLSPGPPWAAWNPLKL PPQHGSGAVPSSACSPWAGSVPAAPPSV CYLIYWNLHSQLAHLR |
| 3436 | 11487 | A | 4366 | 30 | 436 | RRRCGGCFPALFGSPIKHEQLPLCPRV PVA*PSSAEHPDPRAGGGGRGL*AGS SPGAVPHPPSIPGRKNRMGSLEG/RGAP APRRGSGAGAAE/ASLTWPGSTGAPG SHGCSAGVGPSRWAWSLPQRCGR |
| 3437 | 11488 | A | 4367 | 497 | 924 | KRGSRGWFFSTFHHLWGRLOAHLLGPT PALQPCDPGAGARTARPGQTASAAAPL PPRRGAGAPPLRDLARVPAPPCAQRAP PSSSQPGRNQ**AASGPWRPPQAEKEA SAGKRDRPVGARKTAAERDRRQASG GQTR |
| 3438 | 11489 | C | 4368 | 226 | 405 | MCEKQFQNTTSFQGSYPKYTRGSLPELR QLLKVELFKGNWEHLQFRSMLLVRSG LSOE* |
| 3439 | 11490 | A | 4369 | 3 | 275 | TSMYVGPVAKDLLHPSAEENRKITMK RLAQSPNSYFMEAKSP*CYKITTAFTHA QTVGWVWGCVTLQCPTGGEARLTERC AFTRNQRF |
| 3440 | 11491 | A | 437 | 1 | 380 | GPPASVRTDSGHPRRRAEGAVSTRTQAD FLAPCPGPPRAGGQAYARLLQLCLLA AARPSADGSAPDSPFTSPLREEDMSNN FSLESHNISLTHSSMPVENNITLERPSNV NLTCQFTTSGD |
| 3441 | 11492 | A | 4370 | 266 | 455 | AQWHTSIVLAWEAAAAGLLEPRS*SRL KCTMIHPINSHCTPAWQHMRCLLKKNF SNSFSK |
| 3442 | 11493 | C | 4371 | 409 | 507 | MNTRFLTCVPVGVKNNDNYSIVCIDFLV VIAI* |
| 3443 | 11494 | A | 4372 | 870 | 1027 | HLCMCVRVCVACMCTLLHLFSNGFIH* CFCTST*AIHVMG*VAIKMYINDP |

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| 3444 | 11495 | A | 4373 | 1 | 690 | FHHLEDSIIIEIFDAFLTLRKKKRRKKKHNG NMPFISKLFHMVNPMKISTLSFF*HKYMI VPISQSHQYSSNGLSVLFLPVYRHSLEFF MILSTLSFRCLANILSHSLFILLGLINRSL SM*SVLLIY*Y*SYILLQYLLTLVEFFSFH *VFSLLRILFFFKIFTFSIWMPLSQSYLLR HSVFTDVPYLSIYLICVDLFLNTLFCSIG LFILGLTQHCLNSSSFHIV*QSISSHLVQ* DCLCLHLCLFCALSCATKTKNKDVFEFIG LTM |
| 3445 | 11496 | A | 4374 | 393 | 491 | GLYLHRPIPHDKLLVQLSCPFHR*THRG TES |
| 3446 | 11497 | A | 4375 | 435 | 524 | |
| 3447 | 11498 | A | 4376 | 293 | 1228 | NADNSLENFCRKSASCDLEQRRRFIHFIKL RRGSFSEKQQHVSVRKYSPFIQNWLEK DNKALNTRVIYNRFLFMMYKIKQNTDD GDCRLCSYHVLDRHCCKGSTCIDPFPL MTNYWCNYHAHFIDEHTEAQRARNKG QGDCEVGGIESRRRSGNSGARYVDSS PPTSQHNSARPVRLFLATLSKIAFLLTV SLLYEMTVHIYGEPLPRQRITQLLEGVG TLNGSVASVDPVFRNQQLHLATGSLMA SSSFCFVLRRIIGQSLIMKTL*ITHHTH THSHHTHTHTERERERERETEREERVKF |
| 3448 | 11499 | A | 4377 | 953 | 1317 | VLT.LGVSPLYVSKGFVFFLLLS*TMFSH SPTWAILSSWSSLARFSGMSGEPQMTPIG LQYLA*G*RPRNPTLVTFTEIS*VYFFILP LMSQ*MCLMHLFPLPQTFQILQLYFPM AHIST |
| 3449 | 11500 | A | 4378 | 9 | 359 | PRKAELRIFEKVSVTDAMAEDMEKLPR LKKVHIRELVLAISIMPKTHKMLTLRVT WREMLRPRDLK*EVEGGCRCCSSSR/V DPPGGRREFRGGVVRVGRGSAPP*GGPG LSAML |
| 3450 | 11501 | A | 4379 | 223 | 458 | CLRRINPCSPRCRRPAWRRRRPGPRTRR RTDS*IRPKSGAASHPPGGAEGIPRGCS TRSRTRRRPEAPASRPCCLRI |
| 3451 | 11502 | A | 438 | 3 | 217 | RVMSHRKVSAAPRRRGLGLPRKRSSRH RGKVNSLPKEDLVHPLHLTCYLEDSPAF ADIVRNVYKTTGGSAMN |
| 3452 | 11503 | A | 4380 | 887 | 1172 | FPPESELAQPEKRF*VPGKGRGLSPRRL PPRCRRPAWRRRRPGPRTRRTDS*IRPK SGAASHPPGGAEGIPRGCGTRSRTRRR PEAPASRPC |
| 3453 | 11504 | C | 4381 | 22 | 255 | MPSSSAQILLPHEVSPVLSQCLFLKTR VCSYLWATVILGLDYCNLSLPLVSYFLL SLSLPCISVVFRTQILLHY* |
| 3454 | 11505 | A | 4382 | 23 | 361 | LTTLVFAATPGKKRRGGNQWR*SPHYSC SGGTGGRPRPAFSLPGAPGQSGQISQSD WRRGPCS*SSGWCNCS/HPGW/GLVRGG MTS*WSYS*ATGP/GPGYKAJPGAS*RST SL |
| 3455 | 11506 | A | 4383 | 2 | 310 | PLLPAPHPWPVSLPVT*PRCGSPQRTSSW NRHSHRPA*SLPCLGAGTGPKKRRGGN QWR*SPHYSCSGGTGGRPAFAPSLPGAP GQSGQISQSDWRRGPCS |
| 3456 | 11507 | A | 4384 | 1021 | 1565 | PHLSPAGTPLLPAHPWPVSLPVT*PRCG SPQRTSSWNRHSHRPA*SLPCLGAGTGP KKRRGGNQWR*SPHYSCSGGTGGRPAF AFSLPGAPGQSGQISVPPCRVPPLLQSR AGPSPSFSKWELCYCSHILPLPLYAHQ ESLNTQQRLEASLSSLNASEPTTAKCPH GTAACLLGD |
| 3457 | 11508 | C | 4385 | 361 | 612 | |
| 3458 | 11509 | A | 4386 | 448 | 683 | VNMRKKJDLTESSLPVAPTKVPGM/RMK LS*TLKTSLATRCQTLRLCSPTPNQRLS QQBGVGVGEGKELRIYLA MWIK |

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| 3459 | 11510 | A | 4387 | 1977 | 2160 | VNMERKKDLTESSLPAVPTKVPGMRMK LS*TLKTSLATRCQTL SRLCSPTNQRLS QOEGV |
| 3460 | 11511 | A | 4388 | 145 | 370 | GRVLLVLFCEFFETESRSVA*AGVQWRHR GSLQP*ASVSYLEAAVVGYGTTALQPG RQSRALYLKTKTNFLNLS |
| 3461 | 11512 | A | 4389 | 248 | 452 | GWVFTMLARMVLQ*NHLNPGGGGCCSEL RSHHCPTAWATE*DSVSKKKEKEKKMR NETKYKWTCSFFT |
| 3462 | 11513 | A | 439 | 24 | 452 | APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVPWTQRFDFSGNLSASAIMGN PKVKAHGKKVLTSLGDAIKHLDLKGTF AQLSELHCDKLHVDPENFKLLGNVLTV LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH |
| 3463 | 11514 | A | 4390 | 141 | 354 | ARWADWLPGLIANGCPRAHLAYLETWEL EAHWKRTIVNFCVCLCM*VCLVALR LFCSSGMHHSFNRLQ |
| 3464 | 11515 | A | 4391 | 354 | 592 | IRCTQAFALTSVVSGPGTVAHASNPSTLG G*GGQIT*PREFKTSLGKMAKPLYKNL GRHODLCLQARLLQLAEVEGFT |
| 3465 | 11516 | A | 4392 | 63 | 353 | ATEPVWPPCLWPQPLCAKDCRGVARP* CVRPPKASLVSPSSAGNASSIFMDYKCL SPCPFKQLSSPPQSTEPSACELGLINVN LSSRPLSPSR |
| 3466 | 11517 | A | 4393 | 357 | 559 | LILETGSVCVFOAGVK*LCSTVIAHYSL DLLGSSNPPTS DSRVPGCGDVHLYSQVD AAANLVVVAA |
| 3467 | 11518 | A | 4394 | 1048 | 1599 | CRSKWGLASILWLKSFLLGHHLGGDGFK A*FKFHSKFTVLASSKCLLVGF*SHNYG *VRIHLFTY*IFIHF*KDFKSMFPLVLSW PQAILPPWPKVLGLQVLANCQPMFHF NWLKSSKWLRI |
| 3468 | 11519 | A | 4395 | 24 | 452 | APSPDAMG/HSLWGKVNVEDAGGETLG RLLVVPWTQRFDFSGNLSASAIMGN PKVKAHGKKVLTSLGDAIKHLDLKGTF AQLSELHCDKLHVDPENFKLLGNVLTV LAIHFGKEFTPEVQASWQKMTGVASA LSSRYH |
| 3469 | 11520 | A | 4396 | 38 | 553 | APSPDAMGHFTEEDKATITSLWGKVN VEDAGGETLGRLLVVPWTQRFDFSGNLS SSASAIMGNPKVKAHGKKVLTILGEMP* KHLDDLKGTFQAQA*SELALVDKLVHG S*RTFKLPGEMLLVTRFQWQSHFRQKNFT PEGARLSWAERWVTWSWPVALVLRPLP LKLNCP |
| 3470 | 11521 | A | 4397 | 74 | 432 | TTGTLESLSNACFAGALLPFPAPGE*R PWS*HFTRYLGPLNRCAWEGGRG*TGPG LPSLGKALVEGIPSESPGPTVSHPPCCSPRP DPDQSAASLHQVPPPTVHCSHLTLPNG WPGPQ |
| 3471 | 11522 | A | 4398 | 1 | 176 | |
| 3472 | 11523 | A | 4399 | 1 | 188 | |
| 3473 | 11524 | A | 44 | 275 | 403 | FSHFWPPEFLRD*MWLGV/VAHACNPST LGGRGRWIT*GQES |
| 3474 | 11525 | A | 440 | 37 | 527 | APSPDAMGHFTEEDKATITSLWGKVN VEDAGGETLGRLLVVPWTQRFDFSGNLS SASAIMGNPKVKAHGKKVLTSLGDAIK HLG*SQGAPFAQA*SELHCDKPAWDP ENFKAPGEMLLVTRFGQSHFRKNFTPE GCKASWAERWVTGVASALVPSRYH |
| 3475 | 11526 | A | 4400 | 1 | 118 | |
| 3476 | 11527 | A | 4401 | 1 | 227 | |
| 3477 | 11528 | A | 4402 | 1 | 157 | |
| 3478 | 11529 | A | 4403 | 1 | 133 | |
| 3479 | 11530 | A | 4404 | 1 | 169 | |

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| 3480 | 11531 | A | 4405 | 1 | 143 | |
| 3481 | 11532 | A | 4406 | 1 | 89 | |
| 3482 | 11533 | A | 4407 | 1 | 166 | |
| 3483 | 11534 | A | 4408 | 1 | 190 | |
| 3484 | 11535 | C | 4409 | 21 | 218 | |
| 3485 | 11536 | A | 441 | 68 | 398 | GPASNRALGFVVLLETRMVSASVDPPTS TTGSTMCECISIHVGQAGVQMGACWE LYCLEHDIQPSGTMPSHKALWSSDNSFN TFFRETQGRHVPGLSVDLEPAVIAQ |
| 3486 | 11537 | A | 4410 | 1 | 206 | |
| 3487 | 11538 | A | 4411 | 2 | 185 | |
| 3488 | 11539 | C | 4412 | 247 | 393 | |
| 3489 | 11540 | A | 4413 | 1229 | 1784 | RCRREMGSLSSHVSVMVDSGFLWPCWRG PGSRTSNTVENRNP PPPRHP LQQLFILFQ SLSLHL SL/CLSLSTSFQSLFLNLVS/LC QSLPSPSL/CFSP/SLNTHTHTHTHTHT HTHTHTHTESGRCSVLFFPPCPYLYHYR *G*GVGSAALSLPTPHYEMTVFKGNLLY LPASVIVSRVNL |
| 3490 | 11541 | A | 4414 | 76 | 297 | EIRTLRSSSQSLWRRDVRWISGCLKGH ASDHQLCQH*CTHTHTHTHTHTHTHT HTHTHTHTHTHTHTPKMA |
| 3491 | 11542 | A | 4415 | 48 | 327 | EELALRRQRLAELQAKHGDPGDAVAQ QEAHREAMEMRNSILAQVLDQSAAR/V SEQGLIELKKVSQQTEKITVKFNRRKV MDSDEDDDDY |
| 3492 | 11543 | A | 4416 | 786 | 905 | VSEQGLIELKK*COLTEKSTVKFNRRK VMDSDEDDDDY |
| 3493 | 11544 | C | 4417 | 58 | 237 | MAAELEALRRPEAGRAAGPNTGDPGD AAPTGSQSTGQAEEMRNSILAQVSGSSPA PGPG* |
| 3494 | 11545 | A | 4418 | 115 | 432 | LSK*CNKYTHHTHTHTHTHTHTLLNQL K |
| 3495 | 11546 | A | 4419 | 10 | 398 | ENTVFIGLKKQOTRNILPLKICFLRLKIPP LTMPSPPPSPFRKSPDLVPAHTPKEGRLW PWPGPPGSPSKAAHARRPLSTCQD*PPQ REILPGPQPTSPTHCRMSREGRSGTGAR ACQLPLLRPLAS |
| 3496 | 11547 | A | 442 | 3 | 398 | |
| 3497 | 11548 | A | 4420 | 551 | 792 | INFFFF*IDRFSLCHPGWTAQASRLTAT LLPSRFKRLCLSLPSSWEYRPLPPYPAN FCSKLLICLSTFYKYDCGNSA |
| 3498 | 11549 | A | 4421 | 56 | 193 | |
| 3499 | 11550 | A | 4422 | 1 | 3552 | |
| 3500 | 11551 | A | 4423 | 373 | 593 | KKSLESINSRLQLVMKSGKYVLGYKQTL KMIRQGKAKLVILANNVPALR*SKRLNV LRLPRIHRERIYRSVNL |
| 3501 | 11552 | A | 4424 | 118 | 206 | VGGPRPSLRQGRVWVAREKEDKSRWESI NSRLQLVMKSGKYCPWGTSETLKMIR QGKAKLVILANNCALRKSEIYYAMLE KTVGVHHYSGNIELGTACGYRYRVC T LAIDSGGL*PFI*KACPEQTW*KEDEKS RWESINS |
| 3502 | 11553 | A | 4425 | 1134 | 1287 | HGQINQMEVNLPMDRKV*THHTHTHT HTHTHTSSTSCPYTLKRKNVKS |
| 3503 | 11554 | A | 4426 | 102 | 443 | SPIPLPITHTNIVYVLLAFLCIYIHT*JLY IIFFFTNIVSYYTYCFITCVFHLIYVNIY SLKNFTDITCSLWKIRSYRAKRYNC KSHLPEINAFILWQVSFQTL |
| 3504 | 11555 | A | 4427 | 263 | 615 | LNVSEGNWVVKLCHEHQHGLNSSFLLIL LSHSEKINRASIMLKRKYKLNNYLSAF NPPPGKJHTHTHTHTHTHTHTESQKVK ST*EIT*IFPQQYTNLCQREHCYFLSHSE |
| 3505 | 11556 | A | 4428 | 839 | 963 | CVNGLVLGQAQLLRVPVIAL*EAEAGRL LEPRSSRSWANM |

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| 3506 | 11557 | A | 4429 | 526 | 710 | MGVWLNILTFIFGDQSAKGLTLQFKPAR HEFSQSGRTSFPIMPSPRI.PDVA*ENPNG SLDP |
| 3507 | 11558 | A | 443 | 1 | 255 | |
| 3508 | 11559 | A | 4430 | 2 | 539 | |
| 3509 | 11560 | A | 4431 | 920 | 1110 | TAVVFLNKLQLHF*KFLSEAFDNEYGIA YNSLSSEILERLQKIDAPPSASVEWCRC FGAPLI |
| 3510 | 11561 | A | 4432 | 38 | 571 | GSHRRCSFITNYVHLIYFTLIYIYIYIYIY IYIYTQMHSPPAHSVT*LYGNTLSATLE RPVTPAVVAVGFRVSEKQIVVEGAR RG |
| 3511 | 11562 | A | 4433 | 145 | 675 | NVAVASLSGAHTWKKQSQVCVFSAGLE TSMEAAIGDLVSFPGLSTQLEGIQGLVEP VQA*ASSWSSR*AAHSQGPSPSYHRSH LPKPTQRNPERSQMEAPSPKPLDQPVPE KRHRGASAMRRRKPISEFLAEMLHVLA VREIELTNCHPPEPNLATGKMTWLRSSS GFCESNRYT |
| 3512 | 11563 | A | 4434 | 328 | 333 | AFEFKRIDLTFKSSFAGSL*E*LHHTHT HTHTHTNTCLTVMKELSNIPGNK |
| 3513 | 11564 | A | 4435 | 1461 | 1710 | SGVLGRAALLKPPSRARSSGGSSLSILR LSSGPLSSPLPCPTSQDRGIFQTHLN VALT*AAHEMDWREPCVKTRTGS |
| 3514 | 11565 | A | 4439 | 3 | 451 | |
| 3515 | 11566 | A | 444 | 2 | 732 | YLVSCFRDMAFNFGAPSGTSGTAAATA APGFGFGGFGTSTTASGAFSFSAPTNG TTGLFGGTQNKQFGFGTGTGTTGTSTG LGTLGLTGLFGFGFTQQQQQTAVGYS CMPSNKDEDLVVLVFNKETEIRSQQQ QLVESLHKVLGGNQLTVNVEGKTLPL DDQTEVVIVVVERSPNGTSRRVPATTL YAHFEQANIKTLQQLGVTLSTMTRTELSP AQIKQLQNPPAGMFLESQSS |
| 3516 | 11567 | A | 4440 | 26 | 529 | NSTDSETRHPWLLSPADKTNVKA/AWGA KVGHAAGEYGAELRMFLSPTTKITY PPHFDLSHGFAQVKQGWGKVAIDALT KAVAHVDDMPKRRCP*SDLHAHLR VGPSTFKLLSHLPCLGEPWAHLPRPS FNPWRLQRLPWGQSLGFLKLRCLNLP NTR |
| 3517 | 11568 | A | 4441 | 294 | 600 | ISCFCLSETLSNFALFKESNGPVKVWGS IK/AMTENLHGPHVHEFGDNTAGRVLCF FLECIWEL*FII*LFLLLINRCTSAGPHFN PLSRKHGGPKDEER |
| 3518 | 11569 | A | 4442 | 517 | 758 | |
| 3519 | 11570 | A | 4443 | 80 | 725 | SPAASGGFPLQSLERPTLGRGLSDFGDRS PVCVLKGRRPKCRGHNFEQKCRSNGP VKVWVGS/HKGLT*KALHGFHVHFEFGD NTARLYQVQGFHFNPLSQKTTVGPCKDE ESHG*DLGQCDCLTKNGVADVSNEDFV NLTLQGD/HCNIGRTLVPVWKKPDDLGP KVGNBESSKTGNAGKSVVPCGVUGIA RINIPLGCSLRPPKLCIVSC |
| 3520 | 11571 | A | 4444 | 415 | 635 | |
| 3521 | 11572 | A | 4445 | 2 | 478 | MAGKQAVSASGKWLMIKIRKYWYNAAE FNKLGMRDDITYEDEDVKEAIRRLPEN LYNDRMFRIKRALDLNLKHQILPKEQWT KY/EGLCCSSALCFLLR*KDQPIECPSR SQEELL*SKLSPL*TAFT*AKENFYLEPY LKEVIRERKEREWAKK |
| 3522 | 11573 | A | 4446 | 323 | 400 | |
| 3523 | 11574 | A | 4447 | 2 | 396 | RPPTTKFAAARQMAGKQAV*STQAKG LNG/IFKKWYVNAARIQNLKGLMRDDT IYEDVDVSRSP*EDFPENLYNDRMRH* EGHWTLNLKHQILPKEQWINFEEKNFY LEPYLKEVFLRERKEREWAKK |

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| 3524 | 11575 | A | 4448 | 3 | 314 | |
| 3525 | 11576 | A | 4449 | 5 | 340 | GSPTS AKAFRSIWGPLPPVHRHGS PRSSV QR/DGPG/LGTGEPRVYIRNKVANTGVPG AFPGSIGGVTA/PATDYCHRIAPLAARRR RRRRRRRRRRRRGGGGVAGGGGGG G |
| 3526 | 11577 | A | 445 | 2 | 681 | AREGSALRVAGVTYLVSCFRDMAFNFG APSGTCGTAATAA/PAGNTFLLFGGGF GGFGTTSTTAGSAFSPAPINTGTITGLFG GTQNKGFPGFTGFTGTTTSTGLGTGLG TGLGFGGNTQQQQQTTLGGLFSOPT QAPTQSNQLINTASALAPTLLGDERDAI LAKWNQLQAFWGTGKGYFNINIPPVEF TQENFFCRKFAVGYSMPNSKDEGLV VLVFK |
| 3527 | 11578 | A | 4450 | 1 | 117 | |
| 3528 | 11579 | A | 4451 | 1 | 1973 | DGGARARGRAARRRRRRRRRRRRRRRR RRRRRRRRRRRRRRRLGLERPOPTSRGR APGASRAEEKMEELVVEVRGSGAFYK AFVKDVHEDSITVAFENNWPDRQIPFH DVRFPFPVGYNKDINESDEVEVYSRANE KEPCCW/LKAVRM/KGFEFVIEYACD ATYNEIVTIERLSVNPKNPATKDTFHKI KLDVPEDLRQMC/AAH/KDFK/AVG AFSVTYDPENYQLVLSINEVTSKRAHM LIDMHFRSLRTKLIMRNEEASKQLESS RQLASRFHEQFIVREDLMGLAIGHGANI QQARKVPGVTAIDLEDCTFHHYGEDQ DAVKKARSFLEAEDVIQVPRNLVIGK NGKLIQEI/DKSGVVRVIEAENEKNVP QEEIEMPPNLS/PSNNSRVGPNAPEEKHL DIENSTHFSQPNSTKVQRM/VPFVFG TKDSIANATVLLDYHLNLYLKEVDQLRLE RLQIDEQLRQIGASSRPPNRTDKEKSYV TDDQGMGRGSRPYRNRGHRRRPGYGT SGTNS/ASNA/SETSDH/DELSDW/LAP TEEERESFLRRGDGRRRGGGKG/QGGR GRGGGFGKNDHDSRTDNRPNPREAKG RTTDGSLQNTSSEGRSLRTGKDRNQKKE KPDSDV/GQQPLVNGVP |
| 3529 | 11580 | A | 4452 | 1 | 2115 | |
| 3530 | 11581 | A | 4453 | 2 | 424 | |
| 3531 | 11582 | A | 4454 | 1 | 456 | RPRRPQREPTMVLSPADKTNVKAAGWK VGAHAGEYGAELERCFLSHHQDLS/ HFDLSHGSSQVKGHGKKVADALTNVAG HVDDMPNALSALSDLAHKL/RVDP/NF KLSHCLLVT/LAAHLPAEFTPAVHAFLD KFLASVSTVLT/SKYR |
| 3532 | 11583 | A | 4455 | 25 | 640 | EFHRLRENPPWCLSPADKTKAQRPPRLK LGAHAGEYGGEPLERMFLSPYTTKDLLP ALRP*ATVSAQG*RAHGKKVADALTN AVA/HVDDMPQTALSAPERTCNGAQAF GWDPVQLSSS*SHLPCLGEPWAAHLFRP SSTPGCKASLGTKFPGLFVEAPLLEFSK LPLKGLSLRVGHCFAPLGLPSPSSPCT RTPVVFE |
| 3533 | 11584 | A | 4456 | 906 | 1046 | PDHINWSQ*TTTGAQRQT*KRTVKEV*S AHNEAMCFGT/CASDCLYR |
| 3534 | 11585 | A | 4457 | 1 | 383 | MVLMPPVSAIPEAEAKSSLENDVCLSA KENHKSRAITRTAERFPTE/SPHD/YPRK TARTGLRHAQQASL/PNWSPTLAARIAP VPPAANPQGVLLKSAGPHLLARITTC NR*VPIASPTQTHRME |
| 3535 | 11586 | A | 4458 | 1 | 1509 | |
| 3536 | 11587 | A | 4459 | 579 | 919 | PGSM/PLSVSHSTGDDGRSLPKRRSTAPS MTSVYCFNCERCLVSCSLLLSLGPPCL AVLLAPFFAPFP*VFLCVVAVG/PALLL LLVSSLLFLVLLSFAACASACFGLSV |

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| 3537 | 11588 | A | 446 | 1 | 459 | HRRPLYPAGIARMTRGDRIITGCTRPKG SRTGGAVGAAMQEIGSVPHKFDLEIAV EQQLGAQPLFPFGMD/KTPDSQAPISTVW GLLLPSLGLRSSLPRIFGPLRLFKESGA CEFFLKAACGKGMCPFRHISGEKTVVC KHCLRGLCMN |
| 3538 | 11589 | A | 4460 | 1477 | 1691 | YCNVSFGANLERA*TSFSAFLDLOPPGY RTTTSKHKVSSSLIKGHVLLDHSFHDLNT QLWISTNAFRPGN |
| 3539 | 11590 | A | 4461 | 1076 | 1354 | OQKCAVNLHSLFPTKLCRLFASCRAR CCSHLTSPVTA*LAGKVNPPLPLGNLWE CDTKAGSQAMRTHLSITWRAVMQLPVI NTTYQRGKR |
| 3540 | 11591 | A | 4462 | 880 | 1242 | |
| 3541 | 11592 | A | 4463 | 832 | 1386 | |
| 3542 | 11593 | A | 4464 | 46 | 492 | HPVTLDGNTYRTHIKQLIKGEVFLHFTF DAVDVFRIT/MTLPL*RLQLSSQRADDQ RTLRCVSRGRDAVHAAVWQFV CIRLDVE VTEAVIFQFPFLQSDSETVSQRCVDVGL FCRQYTFIFRRIFYFAQMSNLRFLDDYA EEIIDHRQ |
| 3543 | 11594 | A | 4465 | 7259 | 7441 | IASPGWS*ROECSSRSRCAQCCQSTTTCR HAKQRLALAHKPLAKLAGNGITPLRQ ICR |
| 3544 | 11595 | A | 4466 | 538 | 1056 | |
| 3545 | 11596 | A | 4467 | 1 | 1134 | |
| 3546 | 11597 | A | 4468 | 745 | 1263 | |
| 3547 | 11598 | A | 4469 | 3506 | 3826 | EVWRPARRSRDVSCSRSHAYVVPGTA DWLWPS*RPSTTGVCG*PVTWRWLEGG WTPHLGRVLQEDSDSPFFSALGIQETRP EPLKSPREVPISGRTGVFHYPA |
| 3548 | 11599 | A | 447 | 1 | 811 | DGTMEDSEAVQMATALIEQLAQEEEN EKLRGDARQKPLMDLLVLEDEKHHGAQ SAALQKVKGQERVRKTSLLDREIIDVG GIQNLIELRKKRKQKKRDLAASHEPPP EPEEITGPVDEETFLKAAVEGKMKVIEKF LADGGSADTCQFRRTALHRASLEGEHM EILEKLLDNGATVDFQDRLDCTAMHWA CRGGHILEVKLLQSHGADINVRDKLLS TPLHGAVRTGQVEIGEHLGLGLENNAR NREGDTALHDAGRVRNRYPILO |
| 3549 | 11600 | A | 4470 | 1 | 751 | |
| 3550 | 11601 | A | 4471 | 482 | 1200 | VFGSPFSGVGFFFPFGLCPCELSATVLEV APPLLPGNRMSSRITMLSESQRMVIVG YGRCFADRQNLMLVCLSRMNPVFTGSCA RMRCCLENLPVPPSKRAHTGRVAVKE SNQRWCSDDGFEFCDDNGERLVRVTFALD CCDREALHWAVTTGGFNSETVQDVNMLG AVERRRGNDLPSPFVEWREGVFVRNIDE EFGNESAQTGMLIHOLDPSVEGELHQ TGSTACCRADSTHISHWRFM |
| 3551 | 11602 | A | 4472 | 1271 | 1681 | TVITTTGIGRPFSMESVFALNALQNSMMP IPC*PRAGPTGGLCTSFSDDEFILDGWVP QSSQLMIRMCFSVYTMLESQCGMVIWG YGRCFADRQNLMLVCLSRMNPVFTGSCA RMRCCLENLLYRHRNGHIQAEWP |
| 3552 | 11603 | A | 4473 | 739 | 1257 | |
| 3553 | 11604 | A | 4474 | 1 | 2661 | |
| 3554 | 11605 | A | 4475 | 1 | 2370 | |
| 3555 | 11606 | A | 4476 | 421 | 972 | |
| 3556 | 11607 | A | 4477 | 766 | 1073 | HRQLVIVFQOPLVSGFHEAELSDDAKW VLHPGPDAGFHVFDVDRGFVLA*CCFK VLTLPGRSAISQSTVPPRPAPRAVAPLGR HRLRQIAPLAADYPAD |

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| 3557 | 11608 | A | 4478 | 1662 | 2045 | PTALAAFSRRIVRTFLPVGDGPFHQSGS LRLSNPDALQIQPACRIFSSALITSVFACS VHEGE*LPVDPQIIRALLHR*KAESAC AVPCI*AWTDREYGCNRRKSGVILRR DDWMDGRRSRHT |
| 3558 | 11609 | A | 4479 | 1 | 1803 | |
| 3559 | 11610 | A | 448 | 100 | 1532 | EARRNWGAMGKARRSPPGHHRHCEGCF NRHCHIFVPEPNTSLVISCHLGCATFHM CKEAEHQLLCPLEQVPCLNSEYGCPLSM YRHLKAKHLQACASVCCSMWBNRW PNVDSEITLHENIMKETPSECLDTALAL QDQKVLFRSLKMYELFPETREATEEBEFT MNGETSVEEMGGAVGGVDIGLVPHGLS ATNGEMAELSQEEREVLAKTKEGMDLV KFGQWENIFSKEHAASALTSSASCESK NKNDSEKEQISSGHNMVEGEGAPKKKEP QENQKQDVRTAMETTGLAPWQDGV ERLKTAVDAKDYNNMVLVHNGRMILHF GQMPACTPKERDFVYGKLEAQEVKTV YTFKVPVSYCGKRARLDGAMLSCKPSE HKAVDTSDLGITVEDLPKSDLIKTLQCA LERELKGHVISESRSDGLFMDFATQTYN FEPEQISSGTELADLTAAATPGLHVELHS ECVTKRHN |
| 3560 | 11611 | A | 4484 | 875 | 1075 | |
| 3561 | 11612 | A | 4485 | 2097 | 2179 | |
| 3562 | 11613 | A | 4486 | 4274 | 5255 | HTLFGDKLCTVATLRETYGEMADCCAK QEPERNECFLOHKDDNPRLVRPEVD VMCTAFHDNGETFLKK*VIRCL*FKIKK HGVT*ANTL*KLP*QKYFQH*DLEVLL* *FFKEVVFDTTKFYTAKNMIKDILKFET GYNLKQKFKIDKFVFRVRYVMVVIID FVLVSNILPKFNHLCPTHHTHTLTLFST YLKNDRDKTIMCKLSLG*LAESLEFGGS GENVDYNYFCNIVCYRK/ADCFSLKFR YLVELARRHPYFYAPELLFFAKRYKAAF TECCQAADKAACLLPKVLCTRIEKSL SNLILSILWLDLGLSV |
| 3563 | 11614 | C | 4487 | 102 | 230 | MFLSCRSVXXXXXXXXXXXXXSPLF LSPLLFLFHTYMR* |
| 3564 | 11615 | A | 4488 | 2 | 567 | |
| 3565 | 11616 | A | 4489 | 125 | 522 | |
| 3566 | 11617 | A | 449 | 124 | 602 | WATTFPQPKSNSKMAELFMECEEELEP WQKKVKEVEDDDDEPIFVGEISSKPAI SNILNRVNPSSYRGLKNGALSRGITAFA KPTSQHYTNPTSN/VPASPIKF/HPESSRS DSSVIVQPSKPVSVSKTIRPAQSGIGCCL SISTVPSYNSGLS |
| 3567 | 11618 | A | 4490 | 195 | 473 | |
| 3568 | 11619 | A | 4491 | 1 | 966 | |
| 3569 | 11620 | A | 4492 | 1 | 960 | |
| 3570 | 11621 | A | 4493 | 1743 | 1935 | |

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| 3571 | 11622 | A | 4494 | 1 | 1540 | NSGSGGGTSGSGSSGQGMQOSQSG GHQPGGGKKDDIEDKKKKYEPVPVTRVG KKKKKTKGPDAAASKLPVTPHTQCRLK LLKLERIKDYLLMEFEFIRNOEQMKPLEE KQEEERSKVDLDRGTMSVGTLEEIIDD NHAIVSTSVGSEHYVSII.SFVOKDLLEPG CSVLLNHKHVHAVIGVLMDDTDLPLVTVM KVEKAPQETYADIGGLDNQIQEIKESVEL PLTHPEYEEEMGIKPPKGVILLVPPGTG KTFILPKAVANQTSATFLRVVSGELIQKY LGDGPKT/LSRELFRVSEELAPSLRFIDRI LPPLGHKRYD/SNS/GVRRELQRTMLELE LLNPVGMGQFDS*GRL*KLWATNRRIETL DPALIRPAPAFDSKIE/FPLHDEKTKKRIK QHITSRMTLADDVPLDD/LIHLGKIDLS/ GA*HSRAICTEAGLWGL*GERRMKVTN EDFKKSKENVLKKGQEGTEGVVSLMN HGLSSGKWLGD/SIPERDEVGSGCPEESL FPLIFY |
| 3572 | 11623 | A | 4495 | 125 | 320 | |
| 3573 | 11624 | A | 4496 | 1376 | 1509 | |
| 3574 | 11625 | A | 4497 | 2120 | 2313 | |
| 3575 | 11626 | A | 4498 | 2 | 266 | |
| 3576 | 11627 | A | 4499 | 918 | 1475 | |
| 3577 | 11628 | A | 45 | 2 | 343 | NLCQVPFPLFHSLLYVFKTLKGLFOASF LGHLLLLPLSGTGPGRGGGAGGSGRGD PPAAGASRTIPWPLLQQLSSSHFKA/P SKLSSHG*PRALGPPGPYHRPPSGTT |
| 3578 | 11629 | A | 450 | 1 | 368 | ICRFNPYVFLAAKADQLQVRTTQLT/CKS CWLYHCINHSLTQTCNISTL/M/LGHIPG LWILNLSWPDAATPVWHFVKLLTKLT HHACRASGNIFAIVSLVTLITSAMVSSVA LHSSVQMAQ |
| 3579 | 11630 | A | 4500 | 1 | 822 | |
| 3580 | 11631 | A | 4501 | 158 | 668 | |
| 3581 | 11632 | B | 4502 | 151 | 336 | ANSDSMVGYVLGFPLITLVGVVAVG GPAAHILLPMYSYDPAEELHEAEQELLS DMGDPKV* |
| 3582 | 11633 | A | 4503 | 748 | 949 | |
| 3583 | 11634 | A | 4504 | 1139 | 1241 | |
| 3584 | 11635 | A | 4507 | 41 | 488 | |
| 3585 | 11636 | C | 4508 | 187 | 342 | MICKNKNKVILLXXXXXXXXXXXXXXGG AXXXXXTTPRRRGKKQFFLPPQ* |
| 3586 | 11637 | A | 4509 | 1304 | 1434 | |
| 3587 | 11638 | A | 451 | 126 | 373 | GRGTSKILMALORTHSLLLLLTLGLG LAYPSYGHDLVYHRVVDNQHLEETLV MDRCLSVMILLRIISRDCCERLIGLA |
| 3588 | 11639 | A | 4510 | 1 | 1383 | |
| 3589 | 11640 | A | 4511 | 1 | 674 | |
| 3590 | 11641 | A | 4512 | 19 | 249 | |
| 3591 | 11642 | A | 4513 | 1000 | 1174 | |
| 3592 | 11643 | B | 4514 | 60 | 378 | NAVLEADFAGRGYKLPKVRKTGTTIAG VVKYDGIVLGADTRATEGMVVADKNC KIHIFISPNYCCGAGTAADTDMITQLISS LAAMAVFEDKFRPDMEEEEAKNLX* |
| 3593 | 11644 | A | 4515 | 1 | 437 | DPRATEGMVVADKTCQKSTGRPELV AIRMLKQMLFRYQGYGAALVLGGVDV TGP/HLYSIYPHGSTDIAAGIFNDLGS IDLCVISKNLDFLRPYTVPNKKGTRLGR YRCEKGTAVLTKETITPLEIVLEETVQT MDTS |
| 3594 | 11645 | A | 4516 | 1 | 1059 | |
| 3595 | 11646 | A | 4517 | 1115 | 1307 | |

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| 3596 | 11647 | A | 4518 | 3 | 866 | FLGKMAA VSVYAPPVGGFSFDCNCRNA VLEADFAKRGYKLPAPRKTGTTIAGV YKDGIVLGADTRATEGMVAVADKNCCKI HFISPNYCCGAGTAADTAMTQJLISSN LKLHSLSTGRULPRVVTANRMLKQMLF RYQGYIGAALVLGGVDVTGPHLYSITYA HGSTEKVPVYVTHGFLAPLAAMALFER* V*APDMEEEAENLVSEDSPPQPPPSW RIFNOLGSRKPNIDPLPSSARNKLGFSPP HTQLPNKKGTRLGWPRYRCEKGTTAV LTEKIPLWST |
| 3597 | 11648 | A | 4519 | 4 | 181 | |
| 3598 | 11649 | B | 452 | 1 | 1812 | MPSPLFFVATIHDCQELLETTETGPSD LQDVPLEKADATVFTDGSSELEQVGRKA GAAVTETDVLWAHALPANTSQAQKAE IALTQALRWGKDINVDTSRYAFATVHV HGAICQERRLLTSAEKAJKNPNSSKPN RSSSLGNNLRPDGSMYMHRSKGPVAV SVNVNLTPESENLESSCVTKLSPEKEI YEMESLQWENMGKRINHHLQYNGLGD NMECKGNLEGQASQEGLYMCVKITCE EKATESHSTSTFHRIIPTKEKLYKSPNPS QDTGYSQHHTRTTFSKRQPKNCERFPVE GRPLTLPAQTSXGYSKSPVITLLEQKQ EPCVVARVDVTRQCPAAPMVDLSIARV GVMARGNAITLPVCGRDVFTLEVLRG DSVEKTSRVWSGNERDQELLTEDALDD LIPFLTLGQQTAFGRRVSGVIELAGSR RRKAAALTESDYRVVLGELDDEQMAAL SRLGNDYRPTSAYERGQRYASRLQNEFA GNISALADADNISRNKTRCINTAKLPKS VVALFSPHGDYLPVPQAKGNVVTISY MTNRGFFEDKATFAPSFLMNIKGNKTS VVKNSEILQEQQLTVN* |
| 3599 | 11650 | A | 453 | 305 | 1088 | NHWPMLHVTFRDV AIDF/SQKEWECLDT TQRKLSRNDVMLENNYNLGLTG/SDLGS KPVVITLLEQKEPCVVARVDVTRQCPG LLSRHKTKKLSSEKDIHEISLSEKSIKSK TLRLKGSIFRNEWQNKSEFEQQQLKER SISQKKISLKKMSADRRKPSFTLNQRIHN SEKSCDHLVQHKGIDSDVKHDCKECGS TFNNVYQLTLHQIHTGEKSKCEKCGK VFHSYQLTLHQRFHTGEKPYEQCECGK ITFLYP |
| 3600 | 11651 | A | 4538 | 1511 | 1687 | |
| 3601 | 11652 | A | 4539 | 425 | 619 | |
| 3602 | 11653 | A | 454 | 1 | 2088 | |
| 3603 | 11654 | A | 4540 | 122 | 621 | |
| 3604 | 11655 | A | 4541 | 2315 | 2790 | AATTPALRPLRRSSFLMATTITKASTGT WSSPSLPTPPPTITLKAFTTLIQWRP GAQQSPCKPRS*PSSSTPKTGPIGTST EPMTTQWP*STPSMR*LPPALTHIPRSCVP SKTAAWVLGWYATHIERWLSAYSRRQPD SGLGWQTCFAQNLPK |
| 3605 | 11656 | A | 4542 | 645 | 766 | |
| 3606 | 11657 | A | 4543 | 294 | 502 | |
| 3607 | 11658 | A | 4544 | 969 | 1158 | |
| 3608 | 11659 | A | 4545 | 147 | 402 | GRGIQLFHEIQLQSLKTLCEPAVPVQRLR GRTAARWPGSRESPLRPVDFVEYCGVLI FILFI*WRHFHSLCWSGDDIILACLL |
| 3609 | 11660 | A | 4546 | 240 | 433 | |
| 3610 | 11661 | A | 4547 | 3 | 310 | GGQPPHIPPAARPGGRWGCQPPARQPLRP GGSVSTGTGPPGRWQPEISWVSCRHC GPHLSAVWGLPR/LSPLPAGPNPROPLS EPPRPKEFLTPRTQTKFKN |
| 3611 | 11662 | A | 4548 | 3 | 195 | WPPGPLQPRGTEHRPPTDTPRAARSTR SHSPSEPRTRTPWQQR*LPRPSKPSHCPD VIEAA |

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| 3612 | 11663 | A | 4549 | 1 | 1439 | |
| 3613 | 11664 | A | 455 | 140 | 511 | PTQSTRRIATVSIAAAVAPLTLFLYRGDG GLSSRRRADAAGG/APFSLCGEVAVKPPI NPFTELMENA VNDGSHSEEL FCHLKTIS QKEDLTRCTSESHLSWYSHQYQGSKSF PILGFPVLSII |
| 3614 | 11665 | A | 4550 | 292 | 573 | |
| 3615 | 11666 | A | 4551 | 376 | 456 | GEEPTSVF*RNQWNLRFPIKHFGNASPW |
| 3616 | 11667 | A | 4552 | 1663 | 1984 | |
| 3617 | 11668 | A | 4553 | 1735 | 1868 | |
| 3618 | 11669 | A | 4554 | 138 | 279 | |
| 3619 | 11670 | A | 4555 | 72 | 192 | |
| 3620 | 11671 | A | 4556 | 571 | 690 | CQOGFSLQAYGPAQHAISMRFKAKY PDYEVTWANDGY |
| 3621 | 11672 | A | 4557 | 130 | 943 | |
| 3622 | 11673 | A | 4558 | 45 | 405 | GIPGRRNMAVADLDLIPDVVIDSDGVFK YVLIPSLGIPAPGIRPAESKEIVRGYKWA NGHHADIYDKSVGATCRKQGLRTVSLG GGRIIS/HTKSPGQERFTVYGYSGMLWSC PRTPIST |
| 3623 | 11674 | A | 4559 | 613 | 866 | |
| 3624 | 11675 | A | 456 | 1 | 1014 | |
| 3625 | 11676 | A | 4560 | 69 | 430 | |
| 3626 | 11677 | A | 4561 | 144 | 294 | |
| 3627 | 11678 | A | 4562 | 13 | 759 | |
| 3628 | 11679 | A | 4563 | 177 | 328 | INAHKFKVYFLSQAPLKCTWTKSAARE NHV*LTFLMFYGTGTGVCVCL |
| 3629 | 11680 | A | 4564 | 218 | 343 | |
| 3630 | 11681 | A | 4565 | 708 | 916 | |
| 3631 | 11682 | A | 4566 | 829 | 1002 | |
| 3632 | 11683 | A | 4567 | 51 | 209 | |
| 3633 | 11684 | A | 4568 | 8 | 218 | |
| 3634 | 11685 | A | 4569 | 3 | 357 | |
| 3635 | 11686 | A | 457 | 577 | 2195 | IMGCVCQCKDEATKLTEERDGLSNQSSG YRYGTDPTPOHYPSFGVTSIPNYNFHA AGGQGLTVFGVNSSHTGTLRTRGGT GVTLFVALYDYEARTEDDLSFHKGEKFPQ ILNSSEGDWWEARSLTTGETGYPSNYV APVDSIQAEWYFGKLGRKDAERQLLSF GNPRGTFLIRESETTKGAYSLSIRDWDD MKGDHVKHYYKIRKLDNGGYITTRAQF ETLQQLVOHYSERAAAGCCRLVVPCHK GMPRLTDL SVKTKDVWEIPRESLQIKR LGNGQFGEVWNGTWNKNTKVAIKTLK PGTMSPEFLEEAIQMKKLKHDKLVLQVLY AVVSEPIYIVTEYMNKGSLLDFKDG GRALKPNLVDMAAQVAAGMAYIERM NYIHRDLRSANILVNGLICKIADPGLAR LIEDNEYTARQAKFPIKWTAPEALY RFTIKSDVWSFGILLTELVTGRVYPYPG MNNREVLEQVGERGYRMPQDCPSLHE LMIHCWKDPEERTFEYLSQSFLEDYFT ATEPQYQGENL |
| 3636 | 11687 | A | 4570 | 2 | 217 | ECGDVCDTGDRAVSDEEGYIWFGLGRSH HTINAS/GVVKALIVLTPQFLSHDKDQLI KELQHVKSVTAPCIGC |
| 3637 | 11688 | A | 4571 | 1 | 846 | |
| 3638 | 11689 | A | 4572 | 361 | 916 | |
| 3639 | 11690 | A | 4573 | 128 | 416 | RQVLLFWGRGKYHNPFSPCLYPFSAFLG EQGVPLNPFSTLSGKSRFSRQGEPLNPL FPHDLLSVCPNPLFPHDPFFAFLEGKN PRTPTRGST |
| 3640 | 11691 | A | 4574 | 127 | 135 | NKIVLKCWGGENFWGVVWRENGRCFS GLLQAGLGAAWPEPRVG/IVRRNICCIE*L VMAWIRFCMN*KTK |

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| 3641 | 11692 | A | 4575 | 35 | 386 | OLKTDTAQSPRSPLDHHGHASGNHSHG SHHPDGLK*LNKHKRSEKPCPTLTDIPP QKKCKWVPLALSADITL*KSEFSLWILAQ KAPPLSTL*PPLLPAREQMSFDCNFPPLT QIL |
| 3642 | 11693 | A | 4576 | 148 | 336 | IRTPKIGLFNSPGSHSQSPWNSGRLSD/ WTPSQIFSA*QLKTDAAAGSPKPPSPRT PSFR |
| 3643 | 11694 | A | 4577 | 4418 | 5130 | DTISYQLEWRSKLSQETTDQAPMSSL*NF LRSNPWL*RLGA*/WNADEQGVPLIQE MLESWASICKVPKYPNAEAVRPEEQTPH LHPGEINSHVAHTKLWWSLHTDTHIE WCRDSDRGTSIGRSIPCPALCSVRKJHL RPQVLRPTSPRINSPINPHTRT/SQTPPEQ RPGVPPPEPSPGACYKCKQSDHQAKECL QPRIPKPCPICAGPHWKLDCSAHLAATL RAPGTLAQGSL |
| 3644 | 11695 | A | 4578 | 522 | 923 | PSAAGLLEFAGGQLPTLFAWVWSAAEAE QRVLLNSQ/WLLPDRSSGSFVSGSIWPCPE VSVCPSSRCWRPRKPLEAHLVQPPPT LLAPVLVLLAVCYGWSRPLAHTLFAAS RLAHHGVDROQNNLVDKAQILN |
| 3645 | 11696 | A | 4579 | 1 | 569 | MGKKQNRKTGNSKKQSTSPPKERSSSP ATEKSWMENDFDELREOGFRSNYSSEL EDIQTKGKEVENFERNLEECITRITNTEK CLKELMELKTKARELCEECRSLRS/LMRS TGRLLIKKTPFSSG*SRI*FN*ASNLSY* NINSNKSLP*PLKGPILSKPSASNPICSLQ WVQAFQKSESLEPAPR |
| 3646 | 11697 | A | 458 | 561 | 966 | GALCAASVPRCVWSSAGVVALFEEHCA PLVWVYTYECCHYMCSALLSLSCPCAP SERAAGLCRLVVPCHKMGPRILTDLVS KTKDVWEIPRESLQLIKRLGNGQFGEVW MGMLRLNYSLSIFPVWKPINTKDGOR |
| 3647 | 11698 | A | 4580 | 23 | 660 | FIDSMPSPSRYQ*LSQNWKLL*SSYGT KEEPPASPSQS*AKRTKLEASHYLTSNYTT RLQ*LFQKHMTLSPRENLTPACTQVK* TAMLLTQ/RPVWWSLHTDAHEIWCCDS DRGTSIGRSIPRPPALCSVRKIHRLPQVL RPTSPMNISPLNQLSLRLTLPDRLRSLP DHHGRRASARLHPGEINSHVAHTKPVW CSLHTDTHENDKNKQ |
| 3648 | 11699 | A | 4581 | 1 | 764 | MIQEHADKQVORLQGVLLGSIPTAASRA RLHPGEINNHVAHTEPVWWSLHMDAYE IWCRGSDRRTSLGRSIPPLPCLSLRIHL RPQVLRSTSPRINSPINPGHLSDYTPTFQ GCOTMQGRLPWFTLSGKSRFSGEGATQ RQYPIPOQALKGLMPAITRL/STAWPFKA YKLSLPPHFTCPKTRQALQVSSGSAPYQ PNCFAYPFHGAKPIYSSILNTCLYNPLFCS RSQTSFLYYSFAPFIPASIRHLD |
| 3649 | 11700 | A | 4582 | 1 | 400 | MWNAVTLWQORESCIEEESIGLETKE THFIRGPKTLAPVTDWEG/SPSLGV*SMQ GRLSDYTPTFQGFQTTQGRLPWFSFTLS KSCFS/AGRGKLLARPS*VPLPQPLLLH PTILLSPPLTPGQAYSFIP |
| 3650 | 11701 | B | 4583 | 1 | 933 | MEEKERKRRRRKRRRREGDRGERKR MEKQKENQDPKDPPTTSGQPTDQPKKH LTNFKSETKETRFRGPKTPAPVTDWEGS LPLVFNHSDTSLIHPGFGRVPRPRDAC LGPSPLAASPTFLGKGPAAPRQTELGPNS SSASAPPYPNFIASPPHTWSGLQFSPMT SPPPAQQFTLKKVAGAKGIVKDLINLT KVYNNRKKLOFLASTVRQTPATSPAHK NFQIPELQQGVPPPEPPRGACYKFKQS GHRAKECLQPRIPKPHICVGPWHKSD CPHTLAATPRAPGTLAQGSLTPSQIFLA* |
| 3651 | 11702 | A | 4584 | 1 | 582 | |

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| 3652 | 11703 | A | 4585 | 1 | 622 | MAKSFSGSGKSVCKSPKGKNNWTETRM IGDGGGLQEGSLTMKFEDGKYLFGFNIEG DFCEDSNFQTGESVSDVYFENVSAIQRE STGSGIAQERNDGLESRAVLCEIECLS ASLASTSQSSIEQLPTSSPTKTQNMTP DIAEYQWAIWTSKTTTIVLRPS*VLILP QPPLLHPIIFLSPPLTPAPAYSFIPSPQTS FG |
| 3653 | 11704 | B | 4586 | 102 | 1151 | MEEHFMLMGSKNOYRENGHTAQEKL YAFHNISLKQSSLSLSONFPNMENNDGS KDDDDGGDDDDDDQASEAKPNSACIHP GEINSHVAHTKPVVWSLHTDTHENDNG DVGGDDVDDVDDDDGGDDGKDDGGD DDGDTVMVVMIMMMVLMVMVMVVMV VVVVVVVASRKAFLFLINGESESLESHLT GFANIPNHILTVQHIYTPTLPSGETKETR FICGPKTPALVTDWEGSLPLVFNPCRDAS LIQPRFKAASPAILGEGQVLPNPFSTLS GKSRSFEGEGARAYYKCRKSDIIQAKECP QPRIPKLCPCAGPHWKSDCSTHILAAAP RTPGTLAQGLTDSFLA* |
| 3654 | 11705 | A | 4587 | 258 | 479 | TAAARRSSRTSSHSLSLHVPEIWPLOGG MPAARDSS*AASHLCRTPPKIGLNLPGS HSQSPWKSGLRSD*LLPRSSRLS*RAL GQISRGSGSGQVVS |
| 3655 | 11706 | C | 4588 | 259 | 531 | MSPAHKNFQTPEPQRGPPEPPPGAGY KQKSGHQAECQLQPRIPKFPICAGPH WKLDCPTHLASTPRAPGTLAGSLTASQ IFLA* |
| 3656 | 11707 | A | 4589 | 1 | 446 | MNLNRNALVLTFSDSARLHPGEINSHV AHTKPVVWSLHMDTHEIWCSDSDRGTS LGRSIPCTPVL/VLSRFFKIKACYHSPATS WPFKTYKLSQLPHFTCPKTRQALQVSS GAVPYQPCFAYPGCAQPVSEVLNTF LHNSLCRA |
| 3657 | 11708 | A | 459 | 46 | 949 | ARRPRPWLSSARTPRPFWRPSSCCSPM LTTSSETLMMKNIDPSGLETQPF/YEVLQ SNIQHVLVYENPALQEALACIPVQELK RKSQEKLSRARKLDKGINISDEDFLLEL LHWFKEEFFHWVNNVLCSCGGQTRNSR DRSLPSDDELKWQAKEVEDHYCDACQ FSNRFRYNNPEKLETRCGPWCE |
| 3658 | 11709 | C | 4590 | 228 | 260 | MFLGLVGLRT* |
| 3659 | 11710 | A | 4591 | 268 | 390 | |
| 3660 | 11711 | A | 4592 | 1 | 499 | MAPTNCKGSRKCGRPHEQMPHPYLP TLFSDSARLHPGEINSRVPHTKPVVWSL HTDAYEIVYHDSWDGDLPWENTPCPPA LCSMRKIHLPQVLRPTSPRNPISINPEK *NGLKV*F*KHTSPSATNLKRPQGYFYH FPFSEFRPVLGMLQVTSFAQKFTLL |
| 3661 | 11712 | A | 4593 | 1 | 355 | MEVYTKAYWRVPLGSTVGDDGGHGR FIHIFAIKIEQGSTNRCPSGSPATKYVLLC LHGEKVDDLPADQQSIFSPGRSTQGHLSI TGVLMNRISTYMDKEVKVMVTLWTD EELSKLTWRMKFDAMTQLGDLPEWIN PLSSCLLREKDPPTTSGPQTDQPKHELT NFKSTINHAPLTIPLKPNHSYPACQYV POHALKGLKSITRLLQHGILKPNPCYN SPILPVLKPDKAYRLLQDLRLNQIVLSIH PVLKPNITLLSSIPSTTHYSVLDLKHAF TIPLHLSQQPLFAFTWDPDTHQAQQTW AVLPQGGTDSPHYFNQAQSSSSSYTILGII LMKTHVLSLLIVSG*ESIWFQHGVDQR NNI.VDKAQILK |
| 3662 | 11713 | A | 4594 | 260 | 487 | AQACMYTSRWPEATEEPQK*KWLVPA LTDITL*HSFSGTVSLRSSPLSTL*PPPLP AREQPPLTVIFHHI.PKS |

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| 3663 | 11714 | A | 4595 | 1 | 508 | MNMNIKKIVKQATVLTFTTALLAGGAT QAFAKENNQKAYKETYGVSHTRHMDL QIPKQQQNEKYQVQPFQDSTIKNIESAKG LDVWDSWPLQNAQDGTVAEYNGYHVVF ALAGSPKADDDTSIYMFYQKTA/PSPGQ A/TVPILPQPPLLLPHILLSPPLLTSPAYSF VP |
| 3664 | 11715 | A | 4596 | 1 | 1246 | MKGRRSLWLPLADGSSGNGNELOQT SPHDVFSIAIKSTHIGLEYPTSRQSNRVSP QSKRIRQPLGLPSGSTERGPPNNRQKGY TRQOFCHESTPNKGDRVINYLTCLLYOC VRFLAGTGPHILYLSRLASNLELKRDK GRGEQRKEEVTCHFKLAEKENNPPSPFI YPNPIKRPHYPYLSLTFLSDSAHLHPGEIN SFMATHTKPVWWSLHTDAHEJWCRDSDR GTSLGRSILRPPALCSMRKIHRLPQVLRLL SPRNSPISNPHALKGLKPVITRLQHGILL KFINSPYNSPILPVLPKDKPKYKLQDLCLI NQIVLPIHPMMPNPYTLSSIP/CHNPLF CSGSQTCFLYYSFVTPVAPSLRFLHD*TH SS/WFSKLPGLYCRKASQTAPITSVKFKF HPHLLPSA |
| 3665 | 11716 | A | 4597 | 182 | 750 | KWPYCPSSAQQTQLCSSSTNSNCLPY RGTSLGRSIPCPALCSMRK/MPPTTSGP QTDQPKKHLTISNPAEAKGIVKVNAPP SLSDFPKIS*RLGSFSSNHPYLGQRQYPI QQALKGLKPVITCLLQHVLLKPVNSPYN SPILPVQKLDMPYRLVQDLCLINQIVLPI HAMVNPNETHIPLTVLNP |
| 3666 | 11717 | A | 4598 | 3 | 504 | KRPHYPPLLTFLSDSAHLHPGEINNHA HTRPVWWSLHTDVHEIWCRRSDQGTFF WEINPPSSCSLLREKDPPTTSGPQTDQTK KHLTNKSGKRPLFTVPSLTIPIQPLSPF NLGATLQSLPSLNFNSFHVLVFTKETCFI HEPKTPAPVTDWEGSLPLVFNHC |
| 3667 | 11718 | A | 4599 | 1 | 1032 | |
| 3668 | 11719 | A | 46 | 105 | 328 | RDLHMKTTITSKVY*LTBH*SGSVGRDYE LHENPLVGPNIKLGDFVDISHPNDEYSPL LLQVKSLEKEDLQKETIS |
| 3669 | 11720 | A | 460 | 3 | 284 | |
| 3670 | 11721 | A | 4600 | 72 | 724 | FOIAGKWHFOFFHPTRSK*FLS*N*QMV* GA*CPGILLHISPLVSPASATPKSSFFPS HLSPOYQPVQVSLSLNSLPLQTHVTSAPL PRLLLARPSPVPS/SSASA/SLTLQSLYHL PSSHLVRLTVSFRDYPSPTCPAITS*KG WSQRHSQC*CSF/SLYPKSDS*ALFHQI* KSSPVHSGSPGNSPKTLTSPSP*KVKRPSY SQYTFYYPICSRH |
| 3671 | 11722 | A | 4601 | 2009 | 3197 | |
| 3672 | 11723 | A | 4602 | 3948 | 5007 | VLQTFAVSVTAHKGGTPRVCCSQWVR GLADFRNEAADPHDQGMENDPTDFLER LRGALVKHMSLSPDLVEGQLIKDKFIT QAAPDIERKLQKQNGPSLRDIFSPQNGY NWRMASFYLPVANKWKILKSLYQILHL GPDWEGPYTVFLSTPMAVEVTGIDSWIH YTQVKAWKADGATSVNPEEHPKYQGEI NSHV AHRKPVWWSLHTDVNEIWCRRSD RGTSLGKS/HPRSSCVLCSVRKIHRLPQV LRPTSPRNSPILNQELATRA/VKSGH*AK ECLQPGIPIKPHLJCVGPH*KSDCS/SPGS HSQSPWNSGPRLSW/WTSPQFSA*RLKT DTARSPQKPPRPSRMPSFR |
| 3673 | 11724 | A | 4603 | 567 | 678 | |
| 3674 | 11725 | A | 4604 | 1 | 305 | |
| 3675 | 11726 | A | 4605 | 3474 | 3657 | |
| 3676 | 11727 | A | 4606 | 796 | 937 | |
| 3677 | 11728 | A | 4609 | 664 | 1059 | |
| 3678 | 11729 | A | 461 | 420 | 690 | |

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|------|-------|---|------|-----|------|---|
| 3679 | 11730 | A | 4610 | 775 | 944 | |
| 3680 | 11731 | A | 4611 | 279 | 416 | |
| 3681 | 11732 | A | 4612 | 36 | 4704 | |
| 3682 | 11733 | A | 4613 | 124 | 672 | |
| 3683 | 11734 | A | 4614 | 688 | 940 | |
| 3684 | 11735 | A | 4615 | 561 | 663 | |
| 3685 | 11736 | A | 4616 | 217 | 378 | |
| 3686 | 11737 | A | 4618 | 198 | 347 | |
| 3687 | 11738 | A | 4619 | 201 | 424 | |
| 3688 | 11739 | A | 462 | 557 | 753 | HEIGIMEQRKPWKICYFICCCASHAKGSL /CRRMKRAPVYVYGRTPSPDGSIAHGEY HVILLELNTF |
| 3689 | 11740 | A | 4621 | 305 | 440 | |
| 3690 | 11741 | A | 4622 | 936 | 1380 | |
| 3691 | 11742 | A | 4623 | 9 | 1230 | |
| 3692 | 11743 | A | 4625 | 942 | 1293 | |
| 3693 | 11744 | A | 4626 | 40 | 154 | RCWLCPHALFLWLASHLCHFYTFCVQ AEC*VMPPHPL |
| 3694 | 11745 | A | 4627 | 4 | 436 | |
| 3695 | 11746 | A | 4628 | 465 | 748 | |
| 3696 | 11747 | A | 4629 | 92 | 393 | WPRSGPLRLRLTVCCLVPLLSHSLKHLKI SVSAPGP**QIPPFQNRFSFCDTERG*GG ETPLVPKGFSSPHQTL*GTSSGRTOGASQ QLPLLYLSYKTR |
| 3697 | 11748 | C | 463 | 137 | 274 | MRKQLLLPQKKRRVYLLRITKKVEMIPQ DNENPGNTINCHDVVLVQ* |
| 3698 | 11749 | A | 4630 | 1 | 1614 | |
| 3699 | 11750 | A | 4631 | 1 | 410 | KOKVKEAAQRYQYALKKPPREGFGEDL KTFRELKVSLLNLNLRCCRRKMNNSSSC VHILSSRQFAALEDLNEAIKLCFNNREI QRLLLRVEEECRMQQPQQPPPPQPPQ QLPEEAPEP*RT*TRPSSCVPTTVRSRDF C*EWKKSVD/TMQPQQPPPPPPQPPQQL PEEAPEPQHEDISVQDIFEE |
| 3700 | 11751 | A | 4632 | 1 | 972 | |
| 3701 | 11752 | A | 4633 | 196 | 390 | |
| 3702 | 11753 | A | 4634 | 2 | 4417 | |
| 3703 | 11754 | A | 4635 | 158 | 358 | |
| 3704 | 11755 | A | 4636 | 4 | 152 | |
| 3705 | 11756 | A | 4637 | 382 | 458 | |
| 3706 | 11757 | A | 4638 | 46 | 314 | |
| 3707 | 11758 | A | 4639 | 46 | 271 | |
| 3708 | 11759 | A | 464 | 1 | 2155 | MKKKKMKEEEEKEKEEEEEEEELERR KEEDDFCNRTSPAGGSEGPQSEEQPAQ PPEQAGGRPGASPAPEDAEAAAGAEQG GDSTEATAKPKRSFYAARDLYKYRHQY PWKLQSFHSSVSHRRKEIDCKAFKWQDL AFFGELTRGRKSQHNLYRITRLKSLGEL GYESFKSPLVKFILHEALVENTIPNKSQA LEYFVYITDRRRERKLLRFAQKHYTPS ENFIWGPPEKEQSEGSQAQKMSPLASS HNSQTSMHKAKDKSKNSSA VHLNSKT AEDKVPAPKEPVEETDRPSEPSNEAAK PRNTEKDSNAENMNSQPEKTVTTPTTEKK ESVSPENNEEGGNDNQDNENPGNTNCH DVVLPRSPAPAAASSMGNLLGGVSRFP TTVEDCDSTWQTDSEPEPEPGPGGGSE GPGQSEEQAPPEQAGGRPGASPAPE DAEAAAGAEQGDSTEATAKPKRSFYAA RDLYKYRHQYQNFKDIRYQNDLSNLR YKNKIPFKPDGVYIEEVLKWKGDVEKL EHNHTYILWLPLTEQGLNFYAKELTTY EIDESSKTEAIRFPWPWAYKNDARIFWN KT/GLIKLGMFARGVYWOESQHLNESQ HNYLRITRLKSLGELGNEFSKPLVKFIL |

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|------|-------|---|------|------|---|
| | | | | | HEALVGGILFPILRQSALIEYFVYTIRRTG RRKGRKA/LCGFAP/WKHYTAFQGNFIW GDPPSEKEQFGGGGQRPREM |
| 3709 | 11760 | A | 4640 | 1 | 1815 |
| 3710 | 11761 | A | 4641 | 1 | 1284 |
| 3711 | 11762 | A | 4642 | 1 | 1650 |
| 3712 | 11763 | A | 4643 | 1 | 1605 |
| 3713 | 11764 | A | 4644 | 303 | 410 |
| 3714 | 11765 | A | 4645 | 92 | 395 HHHSKLTVTLSPPFPCKKPLPMPKAKLV EERKRNARG*SAKRRKMRQSRVNPSPF VAPVEATQEHETWNAQTLGMLGTSCGT ACYCLELVSMGSRTSAL |
| 3715 | 11766 | A | 4646 | 362 | 497 |
| 3716 | 11767 | A | 4647 | 609 | 701 |
| 3717 | 11768 | A | 4648 | 1 | 104 TYV*PSVFKVN*HPT*SSS*HRKDQTDIL NAINQ |
| 3718 | 11769 | A | 4649 | 1 | 1398 |
| 3719 | 11770 | A | 465 | 226 | 486 NWKTKIITSMCLWGNASFGQLGLGGIDE EIVLEPRKSDFFINKRVRDVGGLRHTVP VLDDGTVYTCGCDNLGVQLGHEKSRKKP EF |
| 3720 | 11771 | A | 4650 | 1 | 1149 |
| 3721 | 11772 | A | 4651 | 3 | 242 |
| 3722 | 11773 | A | 4652 | 213 | 658 EGPARHRLSPVRASKMTKKRRNNGRA/ KKGRAPRQGTAPLKIFPSGLPPNCARCV P/RRDKAIKKFRHSET*WEEAAV/RDLSE ASVFDAYL/LPKLYVKLIYCVSCAIHK QK*SGNRSS*SPAKTRTPPFRFAPAGCW PHGPPTKSP |
| 3723 | 11774 | A | 4653 | 161 | 295 |
| 3724 | 11775 | A | 4655 | 355 | 476 |
| 3725 | 11776 | A | 4656 | 662 | 979 |
| 3726 | 11777 | A | 4657 | 960 | 1387 |
| 3727 | 11778 | A | 4658 | 696 | 996 |
| 3728 | 11779 | A | 4659 | 240 | 461 |
| 3729 | 11780 | A | 466 | 674 | 1026 LWAEGLVWGSIREWLQHTPPNGIRDW AKQRMWRTGQPQAPTRVNISRPSPTPF PRFTTKLMWALGTDPFTHTHSHSFAH IHSCTHA/HVQHEHTYTYSLPHTSRPFLKG SKSIPKP |
| 3730 | 11781 | A | 4660 | 2939 | 3295 |
| 3731 | 11782 | A | 4661 | 44 | 319 |
| 3732 | 11783 | A | 4662 | 2 | 896 |
| 3733 | 11784 | A | 4663 | 68 | 438 |
| 3734 | 11785 | C | 4664 | 208 | 345 MSPDRNIECKATGFTETTYDLLFCKSV SFYQLLISSSGSKSIT* |

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|------|-------|---|------|------|------|---|
| 3735 | 11786 | A | 4665 | 1 | 320 | |
| 3736 | 11787 | B | 4668 | 1 | 651 | MQKEDCVIVLVKLAVEGMAPTQQHILF VAITFSGWPRQCTGSSFKAIDLFLDPDSV MQQIYSFHFGIMCNFDNHAQNLMAVID NIKQDRDMDEAGSHSQQTNTGTGNQT PHVLTHKWELSNENTWTQGGHEHTPGP WVGLADFKNEVVDPHGKVPQTYSV TALKDDVSGIHSFLLVGSWSANFRNEAA EPSALFTIAKIWINLSHQQMNG* |
| 3737 | 11788 | A | 4669 | 1 | 112 | |
| 3738 | 11789 | A | 467 | 153 | 380 | PRSWGQDTPPSRGERSPNSSGTPLPPPG GHPFSPQVPRLQLPPTPDLGPGPGGQAG IQGPGSPITQDGANSRL |
| 3739 | 11790 | A | 4670 | 474 | 616 | |
| 3740 | 11791 | A | 4671 | 197 | 334 | |
| 3741 | 11792 | B | 4672 | 82 | 402 | MGLEKLHPFDAGKWGKVINFLKEEKLLS DSMLVEAREASEDLLVVHTRRYLNELK RKVLRLRLRTQGTGTIMAGKLAVERGWAI NVEADXRKVELEWGTEDDEYLDK* |
| 3742 | 11793 | A | 4673 | 1 | 1524 | |
| 3743 | 11794 | A | 4674 | 39 | 786 | |
| 3744 | 11795 | A | 4675 | 434 | 1333 | |
| 3745 | 11796 | A | 4676 | 772 | 1107 | |
| 3746 | 11797 | A | 4677 | 282 | 377 | |
| 3747 | 11798 | A | 4678 | 233 | 459 | |
| 3748 | 11799 | A | 4679 | 761 | 962 | |
| 3749 | 11800 | A | 468 | 140 | 754 | TAMSSEEGKLVFVGLNFTNDEQALEDH HFSSFGPISEVVVVKDRGTSSGPGGFGFI IFTNPEACFKLPMKKPMNRRSLLEWSVR SRCWIMQAKSASGPEGGGLLGAHWGL GSQLTFFKVVGGPGLIGELSFAMRAMN GESLDGRQIRVDHAGKSARGTRGGGFG AHGRGRSYSRGGDGQYOSGRYDYSR PRGYRYRYGRSRD |
| 3750 | 11801 | A | 4680 | 3 | 190 | |
| 3751 | 11802 | A | 4681 | 150 | 338 | |
| 3752 | 11803 | A | 4682 | 168 | 375 | |
| 3753 | 11804 | C | 4683 | 55 | 444 | |
| 3754 | 11805 | A | 4684 | 64 | 322 | |
| 3755 | 11806 | A | 4685 | 2 | 38 | |
| 3756 | 11807 | A | 4686 | 185 | 451 | SOHGRPRQVDHLRLVGVGDOLDQHGET PSLLKIQNWPGVVAHACNPSYSGG*GRR LRLTLGGGGCGLRSCHCTPALATRAKL RLKKKK |
| 3757 | 11808 | A | 4687 | 344 | 468 | |
| 3758 | 11809 | A | 4688 | 204 | 286 | |
| 3759 | 11810 | A | 4689 | 206 | 395 | TFCLVFFQFSYNFQLPVPFNTALVC*RH* LIAFLNLRHII*FYKYISYIFVKL*QNQISKP WF |
| 3760 | 11811 | A | 469 | 2 | 259 | GGIDLAFPH/HENEIAQCEVFHQCEQWG NYFLHSGHLHAKGKEEKMSKSLKNYITI KPSTTVTAPCSKLSSCSWG WALSWRTH VPT |
| 3761 | 11812 | A | 4690 | 2112 | 2221 | |
| 3762 | 11813 | A | 4691 | 116 | 382 | |
| 3763 | 11814 | A | 4692 | 11 | 666 | |
| 3764 | 11815 | A | 4693 | 47 | 241 | |
| 3765 | 11816 | A | 4694 | 246 | 485 | |
| 3766 | 11817 | A | 4697 | 3 | 728 | |
| 3767 | 11818 | A | 4698 | 825 | 941 | |
| 3768 | 11819 | A | 47 | 1478 | 1732 | GGQGRWITRSVAVDPHQDGEKPSLLKI QKLARHGGRRLL*SQLLRLR/QENCNLN GGGCGSEPRSHPCPAWVTEQDSVSKK KKK |

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|------|-------|---|------|------|------|---|
| 3769 | 11820 | A | 470 | 198 | 353 | |
| 3770 | 11821 | A | 4700 | 1 | 299 | MAIRKNEVFEGWDGRKGVSHGEGCFSK GSNIGAYLGKSQEQFEGNIRGNRQIIVNN ESKLIKISEEDLTPMRQRQNTLPKSPFGSQ LEKEDEKKQELVDKAIKPSVEATLESIQR KLQEKRAESSRPEDIKDMTKDQIANEKV ALQKALLYESIHRPVTKNRQVMKPL YDRYRLVKQILSRANTPIIIVSRIPSRGWY NTFP*CPQGGCFPLASPGASSE |
| 3771 | 11822 | A | 4701 | 1 | 238 | |
| 3772 | 11823 | A | 4702 | 1082 | 1436 | |
| 3773 | 11824 | A | 4703 | 126 | 417 | |
| 3774 | 11825 | A | 4704 | 867 | 961 | |
| 3775 | 11826 | A | 4705 | 3 | 242 | |
| 3776 | 11827 | A | 471 | 103 | 483 | NTAVSTTVAGSCLASESAGAPLPSALS VLGVPAWPNKGRSCLPGRPSTGEDLGA DFIPNPTLGLYIGWVQVPIRFLGSHVSLR PESLLTQLRLNAFVFSGHLHAKGKEEK MSKSLKNYITIKKK |
| 3777 | 11828 | A | 4710 | 244 | 318 | |
| 3778 | 11829 | A | 4711 | 1 | 1605 | |
| 3779 | 11830 | A | 4712 | 1 | 816 | |
| 3780 | 11831 | A | 4713 | 395 | 1374 | KVTLMRWLYKG*NSGPMVS/TEEMDLAI EASEMIVLQSLHKYQPLRHVEVNDGEP EAACNASNTHIFTQETQFIAGTAYLVNAE ITQLKIDNNPFAKGFRNFESMYTSVDTS IFSPPGPNQCFLGGDHYSPLLPNQYVPVS RFYFDPDL*GQAKDVGSSRVNREVSKDF ADFOTTIKQDFRLLGQTSVDRLLQLSQG QAVKGNQLLPVSLVKRKTTLAPNTQTAS PRALADSLMQLARQVSRLESQGFADF GTITIKQDFRLLGQTSVDRLLQLSQGQAV KGNQLLPVSLVKRKTTLAPNTQTASRA LADSLMQLARQVSRLESQG |
| 3781 | 11832 | A | 4714 | 1 | 2109 | |
| 3782 | 11833 | A | 4715 | 251 | 623 | |
| 3783 | 11834 | A | 4716 | 36 | 69 | |
| 3784 | 11835 | A | 4717 | 328 | 441 | |
| 3785 | 11836 | A | 4719 | 560 | 688 | |
| 3786 | 11837 | A | 472 | 98 | 1339 | GLRAAQAWAPRCRPRWALGGGLGGTGL RSLASAGGRGRAWLQPTGRETGVQVYN SLTGRKEPLIVAHAAEASWYSCGPTVYD HAHLGHACSYVRFDIRRLTKVFGCSIV MVMGITDVEDDKIIRANEMNISPASLAS LYEEDFKQDMAALKVLPTTVYLRVTENI PHIISFIEIRIARGNAYSTAKGNVYFDLKS TGDYKGLVGEVPGVGEPADSDKRHA SDFALWKAAPQEVFWASWPGRPG WHNECSCLASNGIWKVNLDIHSGIDLA PPIHHEIEIAQCEVFHQCEQWQNYFLHSG HLHAKGKEEKMSKSLKNYITIKDFLKT SPDVFRRFCLSSYSRAIDYSDSAMLQV SSCSWLGSLFEDARALHGRGAALRL RQGSDAVGEALQHQEGREGGLGR |
| 3787 | 11838 | A | 4720 | 245 | 382 | |
| 3788 | 11839 | A | 4721 | 235 | 425 | |
| 3789 | 11840 | A | 4722 | 253 | 363 | |
| 3790 | 11841 | A | 4723 | 235 | 320 | |
| 3791 | 11842 | A | 4724 | 1 | 1326 | |
| 3792 | 11843 | A | 4725 | 2 | 1502 | |

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|------|-------|---|------|------|-------|---|
| 3793 | 11844 | B | 4726 | 144 | 2704 | XHGSVVVWDLREDSRLHYSVTLSDFGW TFRATFSTDGILTSVNRHSPQLAVEPIST SVHKKQSFVLSPFSTQEEM5GLSFHIASL DESGVLNVWVVELPKADIAGSISDLGL MPGGVRKLVDSSTDSHVAVTGLQWSPTR PAVFLVQDDTSNIIYWDLLQSDLGPVAK QQVSPNRLVAMAAVGEPEKAGGSFLAL VLARASGSIDQHLKRRWAAPEVHSCVE RKWSGHTASRVHTHSPSLLLFCNPLDD WSRSFETEAPKHWVFFPEYRNVKIVKK ETSKKANDLPLSLTPREELARCLWAPPSP SYEGPMTAEAVPWNESSHSGRREGPE PHRRSSAEQEVQAARLQGGKERKARGE HORSIKGRENGAKQDKPRQAPPTVSFVR QPSPPSRESAHSSGTRFQLGCSHTEL TGG HLASLCDYLLQTPRPGVPEHRASPGSKC TRHSHSHTLGRGEGVVC TPCSATDTPQV VERESNPLDEVRRGHAGEHRLSLSLST VGAESISSKSTGWAPLNAPVRTL GESLG SAFSSASIALRTSVKRRHKWARPHINGA RQPPGGKGTTPGGKEHPYEIKAPPCVSR WLSPPPGTPTSC TTVRRSWLPALKHCC VLRREMAVCHRLSKCPANAIVKHPCG KSPPYRALWHRSQVWTVAGTQSPNIR AHRDQTLRNNYITILIPGNWRHGYAG VSSFSRX* |
| 3794 | 11845 | A | 4727 | 8 | 3281 | |
| 3795 | 11846 | A | 4728 | 162 | 347 | |
| 3796 | 11847 | A | 4729 | 201 | 522 | |
| 3797 | 11848 | A | 473 | 414 | 833 | NVLVICQRNSNSFKKLFKVRDDGEQTQQ DFSALQ/AS/SQGRFELVHSRGVQPGW HQPPWVCOQPLAKAAFTALLVLESREE ERTVTAEGAPLSPGGPHTSPSGRDAGG SNLGTFSRSYSQRLEFLSSRKLNCINCKL S |
| 3798 | 11849 | A | 4730 | 205 | 424 | |
| 3799 | 11850 | A | 4731 | 343 | 500 | |
| 3800 | 11851 | A | 4732 | 103 | 361 | |
| 3801 | 11852 | A | 4733 | 1097 | 1298 | |
| 3802 | 11853 | A | 4734 | 874 | 1184 | |
| 3803 | 11854 | A | 4735 | 451 | 641 | |
| 3804 | 11855 | A | 4736 | 1 | 1215 | |
| 3805 | 11856 | A | 4737 | 1 | 417 | |
| 3806 | 11857 | A | 4738 | 19 | 345 | AATLGHCPSIIQCWRSAAGSCPRASSGPQ ASPMWV*STDLR*MSWATSLQGWCPQ WPPTPSCSSSWAALHHRCGWVCHCH LTGEDLRPEARLPGGQQPGAGGPGPQ |
| 3807 | 11858 | A | 4739 | 40 | 209 | DGRNCNSQWSRRQLQGPWRVHTGPGFAS ARLPQHPGPGCPLLCGHCVQPEEYFP *LPQHPGPGCPLLCGHCVQPEEYFP |
| 3808 | 11859 | A | 474 | 635 | 901 | PHIPEKGPKLRAVLPSPDFPPGSRLAGSP GA PPPPHFEDRLHQGSSPHIPRLLER SLAQGGAAPLGPPRMPHGAAPQGCSPST PT |
| 3809 | 11860 | A | 4740 | 2 | 4097 | PCPPHADCRDLWQTFCTCQPGYYGPGC VDACLLNFCQNGGSCRHLPGAPHGYTC DCVGGYFGHHCEHRMDQCPRGWWS PTCGPCNCDVHKGFDPNCNKNGQCHC KEFHYRPRGSDSLCPDCYVPGVSTSRSC APHSGQCPRCRPGALGRQCNCSDFAEV TASGCRVLYDACPKSLRSGVWWPQTKF GVLATVPCPRGALGLRGAGAAVRLCDE AQGWLEPDLFNCTSPAFRELSLLDLGLE LNKTALDTM |
| 3810 | 11861 | A | 4741 | 2 | 10321 | |
| 3811 | 11862 | A | 4742 | 157 | 273 | |

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| 3812 | 11863 | A | 4743 | 469 | 676 | |
| 3813 | 11864 | A | 4744 | 237 | 497 | |
| 3814 | 11865 | A | 475 | 816 | 1099 | HFGEFFFFL.RQSL/NSVAQAGV/KWRDPS SLQPLPPGFKRFS/CP/SLPSSWDYRRVPPH LANFCIF/MSRRGFIMLARLA/QPQ/CDPPI SASQSARITGV |
| 3815 | 11866 | A | 4750 | 303 | 1978 | |
| 3816 | 11867 | A | 4751 | 142 | 408 | |
| 3817 | 11868 | A | 4753 | 49 | 163 | |
| 3818 | 11869 | A | 4754 | 665 | 733 | AQEP/LTWCLJ.FTLVPGKCEWRQV |
| 3819 | 11870 | A | 4755 | 334 | 520 | |
| 3820 | 11871 | A | 4756 | 3 | 222 | |
| 3821 | 11872 | A | 4757 | 133 | 205 | DLPQAQSNLQWPRKTS*LKPHERL |
| 3822 | 11873 | A | 4758 | 250 | 532 | |
| 3823 | 11874 | A | 4759 | 524 | 677 | |
| 3824 | 11875 | A | 476 | 3 | 232 | |
| 3825 | 11876 | A | 4760 | 110 | 1520 | |
| 3826 | 11877 | A | 4761 | 1 | 635 | |
| 3827 | 11878 | A | 4762 | 2 | 4398 | |
| 3828 | 11879 | A | 4763 | 2016 | 2227 | |
| 3829 | 11880 | A | 4764 | 1388 | 1520 | |
| 3830 | 11881 | A | 477 | 2 | 732 | FVPGAEMAASGRCLCKAVAASPPFAWR RDNTEARGGKPEYDAGVIGAGHNGLV AAAYIQR.LGVNTAVFERRHVIGGAAYT EEIIPGFKFSRASYLLSLLRPQIYTDLELK KHGLRLH.RNHYSFTPMRKRVQAAKVP RCLLLGTDMAENQKQQAQFSQKDAQVF PKYEEMHRLALAIIDPLDDAAPVDMAAF QHGSLLQKRRALSTLKPLKAGRILGAQ LPRYYEVLTAISIKVLDQWFE |
| 3831 | 11882 | A | 4770 | 620 | 903 | |
| 3832 | 11883 | C | 4771 | 230 | 487 | MLNLASPLDKLTQNTQNGDSSHTISS NSIHKHTSSSSVLPDGTLEALFVSSPKV EASPLEAXVPCSAHSNCNTSKLNRRL* |
| 3833 | 11884 | A | 4772 | 1 | 350 | |
| 3834 | 11885 | A | 4775 | 97 | 185 | |
| 3835 | 11886 | A | 4776 | 845 | 942 | |
| 3836 | 11887 | A | 4777 | 510 | 636 | |
| 3837 | 11888 | A | 4778 | 22 | 333 | |
| 3838 | 11889 | A | 4779 | 310 | 422 | |
| 3839 | 11890 | A | 478 | 161 | 610 | GRRPSFOETPRPTSLSGAPTPRHSRCPN HTVSSASLSLPSRHL.FYRHCNRFNILL EPSGCKDFTLLLAIKSQPGHVERRAAIR STWGRVGGWAMGRHLKTD/GSSVYVWH DA/RTPTQLMAYESREFDDILQWDFTED FFNLTLKEL |
| 3840 | 11891 | A | 4780 | 1 | 140 | KIRCEGLSRLDKGE/RR/RGKGHDG/LYQ GLSTATKDTYDAFHMQUALPPR |
| 3841 | 11892 | A | 4781 | 17 | 283 | |
| 3842 | 11893 | A | 4782 | 2 | 673 | |
| 3843 | 11894 | A | 4784 | 131 | 523 | |
| 3844 | 11895 | A | 4785 | 197 | 582 | |
| 3845 | 11896 | A | 4786 | 235 | 416 | |
| 3846 | 11897 | A | 4787 | 280 | 569 | |
| 3847 | 11898 | A | 4788 | 208 | 486 | VQRHCLAGLIHHPQKWNPKDQILDPIW RQGRRTSPRAPGRGPGARGAPAPSPAP RGRRRWAGFRQRTPHTGPPAPTKAKT LLAGREPPR |
| 3848 | 11899 | A | 4789 | 190 | 594 | |
| 3849 | 11900 | A | 479 | 15 | 405 | GGTGAMAPW/AGGEHSRMNPLRAVW/L TLTAAFLLTLLQLLPPGLPGCAIFQDLI RYGKTKCGEFSRPVACRAFDVPKRYFSH L/YTISFLWNDISAFW/LFLFLFLTPLFSY LRLFLFHSHLASCFHFLV |

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|------|-------|---|------|------|------|--|
| 3850 | 11901 | A | 4790 | 523 | 722 | |
| 3851 | 11902 | A | 4791 | 171 | 320 | QDI.FSSSRQLEAFSNTCKRQRTQRTCTNR MYR*RYSCGGTE*GSYPTNLE |
| 3852 | 11903 | A | 4792 | 243 | 445 | |
| 3853 | 11904 | B | 4793 | 320 | 434 | XQCPLNRMAGHISSPYRSEAVVSSPGAP VRTGPSWEPEGK* |
| 3854 | 11905 | A | 4794 | 146 | 609 | |
| 3855 | 11906 | A | 4795 | 874 | 1126 | |
| 3856 | 11907 | A | 4796 | 1 | 957 | |
| 3857 | 11908 | C | 4797 | 209 | 406 | MTRCGSLGPSLQGVYMATVRRGDSVW WGTECGRDSPAVRVSLFLCSCWGWWWS RGLTPWRPCGP* |
| 3858 | 11909 | C | 4798 | 133 | 237 | MFMDXXXXXXGGRFGSLGGPKFTRAC KVKFFSL* |
| 3859 | 11910 | A | 4799 | 250 | 422 | ASAMVTSTSTPGSILMEVICTISEGLCKS MSRL*ILJWKRSHVLEPSQGVFLVVI |
| 3860 | 11911 | A | 48 | 1662 | 1858 | PSFLETEPCSIQARVGVHDLGSLQPLFP GSSNSPASAQVAGITGA*HARLIFLFF VEMGCAE |
| 3861 | 11912 | C | 480 | 80 | 370 | MWAPREQLL GWAAEALPAKDSAWPWE EKPRYLGPVTFEDGAVLFTAEWKRLSL EQRLNYQEAMLENLNTLSLXXXXXXX XXXXLALDLNLGFWL* |
| 3862 | 11913 | C | 4800 | 33 | 158 | MRMQQP5VKPGFKDLQKCKTPLLML KYIVLENIGLKIFLR* |
| 3863 | 11914 | A | 4801 | 3 | 344 | AQDRLHWGQTQNGQGGHALVPAEV* WDHPSWQINSRFYKPEQ*KVFTSSSSSS GGAVLKNPWGGQSLRGLARKNLFYRG PNKNLPGNFGKETLLWGGDKLQGPFSR NLRL |
| 3864 | 11915 | A | 4802 | 7 | 1268 | |
| 3865 | 11916 | A | 4803 | 65 | 376 | |
| 3866 | 11917 | A | 4805 | 64 | 1355 | |
| 3867 | 11918 | A | 4806 | 2 | 451 | AQKESRSVQSRWKLKPLVLSPLOTGL TVQSTWSTCPVSRVLVLSQLGVHSRL SSRCRDEGFSDDPEATEPQGNPNP*PSC* GAGTAWGRMEPPAPQHPGDFPTI.*MS WC*DCVNPKTTHGPVLWPPEAKTKQP DTLCSGAGLY |
| 3868 | 11919 | A | 4807 | 239 | 580 | ASTREVSLSGRTWPMIMVVPPTSAAWG MSLISCTPLCLFLPCRLSDR*PCSKASFSSD PRSSRRQVEWHI.VKALPSPSEDAPPPPA RNSPAEASPVFMQNFILISAKPNFLASL |
| 3869 | 11920 | A | 4808 | 1 | 180 | FPGLGPHPCSNCHLP*APSPPLLP*PPL SSQPLSEERGSEGRSEGVDAAHTARLAP NG |
| 3870 | 11921 | A | 4809 | 1018 | 1284 | |
| 3871 | 11922 | A | 481 | 1 | 1083 | |
| 3872 | 11923 | A | 4810 | 704 | 978 | |
| 3873 | 11924 | A | 4812 | 63 | 131 | |
| 3874 | 11925 | A | 4813 | 204 | 448 | |
| 3875 | 11926 | A | 4814 | 397 | 553 | |
| 3876 | 11927 | A | 4815 | 361 | 764 | RSKYAASKPALAIWDHHPGNLVIRISAVII *RHTWFKLILFNVIITVFSSEHFNFLFLF CLFFIIHFFDQPGHICLCVTPATCVRHL GIMRKSC |
| 3877 | 11928 | A | 4816 | 137 | 262 | |
| 3878 | 11929 | A | 4817 | 265 | 394 | |
| 3879 | 11930 | A | 4818 | 1817 | 2233 | RITFQERLQARSREVGSARPKTARQVC RLPAAAKSPLARSACFRCLQKVTEE RECGRITGSP*TSSFTKTLRTITPFS*HRR RVGIIQSNQPPPEPDSNDRTLRLPEPEGCW SESWAPPHFASSNRLPGSESMF |
| 3880 | 11931 | A | 4819 | 569 | 950 | |

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|------|-------|---|------|------|------|---|
| 3881 | 11932 | A | 482 | 3 | 503 | TGTPVSTISWCCYLVCLLACVRAQMW APREQLI.GWTAEALPAKDSAWPWEKP IYL.GPVT FEDVAVLFTEAEWKRLSLEQR NLYKEVMLENLRNI.VSLAESKPEVHTW PFCPLGFGSQQLSQDELHNHPGPHFA GNQLHPGNPCPEDQPQSQHPSPDKNHRG AE |
| 3882 | 11933 | A | 4820 | 1868 | 1912 | TFVKN*DRSKHITY |
| 3883 | 11934 | A | 4821 | 1003 | 1094 | |
| 3884 | 11935 | A | 4822 | 810 | 970 | |
| 3885 | 11936 | A | 4823 | 133 | 261 | |
| 3886 | 11937 | A | 4824 | 76 | 475 | |
| 3887 | 11938 | A | 4825 | 1 | 1647 | |
| 3888 | 11939 | A | 4826 | 1 | 1459 | |
| 3889 | 11940 | A | 4827 | 456 | 705 | |
| 3890 | 11941 | A | 4828 | 417 | 791 | |
| 3891 | 11942 | A | 4829 | 553 | 734 | |
| 3892 | 11943 | A | 483 | 138 | 2125 | |
| 3893 | 11944 | A | 4830 | 246 | 346 | AFEENLLRVCKKLYSVFTQMPKMFAN VFIGAN |
| 3894 | 11945 | A | 4831 | 3 | 241 | SCERARFWAAAVAGVAATRVRRRLAIT GLTMERKVLALHARKKRTAKKDKAQ RK*/RLVPQHPILWIFLRHLLCSGFTS |
| 3895 | 11946 | A | 4832 | 195 | 266 | GVWRPLSGCNASSA*SQEPCIT |
| 3896 | 11947 | A | 4833 | 1 | 1278 | |
| 3897 | 11948 | A | 4834 | 2854 | 3176 | PVSISSVCRASPKSRIFSSQSSETARLLGF RSL*IMSAECIYFRFRRIW*IRN*TWSSVS F*HFHNVVQICPHEMGHQIHIEFLQRPC RCKNVQQTNNHIFMFHMFK |
| 3898 | 11949 | A | 4835 | 1 | 2991 | |
| 3899 | 11950 | A | 4836 | 472 | 575 | |
| 3900 | 11951 | A | 4837 | 1 | 248 | |
| 3901 | 11952 | A | 4838 | 676 | 788 | |
| 3902 | 11953 | A | 4839 | 212 | 677 | |
| 3903 | 11954 | A | 484 | 1 | 2580 | |
| 3904 | 11955 | A | 4841 | 92 | 316 | |
| 3905 | 11956 | A | 4842 | 1 | 578 | |
| 3906 | 11957 | A | 4845 | 788 | 1173 | |
| 3907 | 11958 | A | 4846 | 35 | 406 | SGTPASPCLEMDPNCSCSPVSGCACAGS CKCKECKCTSCCKSECRAPANLGDGPS *SREPRALQAGAGQ*PASPNSFNT*FRIR PQIALKMGCCSCCPVGLCAKCAQGCIC KGTSDKSCCA |
| 3908 | 11959 | A | 4847 | 299 | 981 | |
| 3909 | 11960 | A | 4848 | 152 | 797 | |
| 3910 | 11961 | A | 4849 | 1 | 124 | |
| 3911 | 11962 | A | 485 | 1 | 687 | |
| 3912 | 11963 | A | 4850 | 2 | 719 | |
| 3913 | 11964 | A | 4851 | 98 | 263 | |
| 3914 | 11965 | A | 4852 | 741 | 965 | AHLPEFLSPCPSLGGPRPRSHCRW*HCP RLRAAPPA*SALCLGGCCCEVAAPGRW YCWVPGDRACSPHTCAR |
| 3915 | 11966 | A | 4853 | 105 | 284 | |

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|------|-------|---|------|------|------|--|
| 3916 | 11967 | A | 4854 | 407 | 1815 | TRATRWKRTKRYTLRKTERWSRVIMD SASR/HAPGNGL YVNYGLKALNIHGGQK LTLAEHGGAYGATADMSAKIGGEGDLAI NTVRQVSLNGQNDYQGATYVQMGTLR TDADGALGNTRRELNISNAIIVDLNGSTQ TVYETFTGQMGSTVLFKEGALTVNKGGIS QGELTGGGNLNVTTGGTLAIEGLNARYN ALTSISPNAEVSLDNTQGEFSSKRRQTRK EIFLSRMEQILPWQNMVEVIEFPYKAGN GRRPYPLETMLRIHCHMOMHWNLSDGAM EDALYEIASMRLFARLSLDSALPDRITIM NFRHLLAQHQLARQLFKTINRWLAEGV MMTQGTLDVATIEAPSSTKNKEQQQRDP EMHQTKKGHQWPLWHEGPHCLVTTAA NEHDLNQLGNLLHGEEQFVSADAGYQG APQREELAEVDVWLIAERPQGVPARHR LSAHGCVLYTALSRRVIALPLPVSAPP |
| 3917 | 11968 | A | 4855 | 1020 | 1352 | |
| 3918 | 11969 | A | 4856 | 491 | 628 | KTITNWRCYSRWPTCFGRK*YDWHRQ MTPPRQRAVLWTKSPKTV |
| 3919 | 11970 | A | 4857 | 1 | 1872 | MVIVPIGYAAQELFDVSQVRGGTPYGAT TIAGGDSGRQSPQSEELSIARYQGEYVAG VRYRSTFPYPGIS/ALSVLSHILVLYCTAGL HIGAIAIVTRYAYCNSFEFSSKRRQIRKEI FLSRMEQILPWQNMVEVIEFPYKAGNG RRPYPLETMLRIHCHMOMHWNLSDGAME DALYEIASMRLFARLSLDSALPDRITIMN FRHLLAQHQLARQLFKTINRWLAEGV MMTQGTLMHOTKKGNQWHFGMKAHIG VDAKSGLTHSLVTTAAANEHDLNQLGNL LHGEEQFVSADAGYQGAQPREELAEVD VDWLIAERPGRKSASCIQKLNNTMIYVT HDQTEAMTMATRIVIMKDGIYQQAER NDWHFTIGAMYEIENVEGYGEDLDGLA DPSVYFNAANGPCRIALGYHEGPENIT RAPEEMRSFLLDAGAENYGYAADLTRT WSAKMTNDYAQLVKDNDQALALIAI MKAGVSYVDYHIQFHQRIAKLLRKHQII TDMSEAMVENDLTGPFMPHGIGHPLGL QVHDVAGFMQDDSGTHLAAPAKYPYLR CTRILQPGMVLTIETPGYFIESLLAPWREG QFSKHFNWQKIEALKPFGGIRJEDNVVHI ENNVENMTRDLKLA |
| 3920 | 11971 | A | 4858 | 1231 | 1407 | |
| 3921 | 11972 | A | 4859 | 491 | 553 | |
| 3922 | 11973 | A | 486 | 444 | 843 | EKSVSYLIFPCVFFLPSTWEKEDAVNIIQ FWLAADNFQSQLAAKKGQYDQEAQN DAMILYDKYFSLQATHPLGDRCTTIKI ESNICREGGPLNCFITPLRQAWTTMEK VTQNFKRKLQEVLLVELNKI |
| 3923 | 11974 | A | 4860 | 3 | 278 | |
| 3924 | 11975 | A | 4861 | 2455 | 2871 | |
| 3925 | 11976 | A | 4862 | 656 | 949 | LLIIRFCRWALAPGAILQIPKKQQRVG LHYSPPMSYVSWRYRVCHWITVCLSK TLATSYARPASISVKNKRWRCFLPKVK INH*NRICLPPPR |
| 3926 | 11977 | A | 4863 | 448 | 582 | |
| 3927 | 11978 | A | 4864 | 495 | 920 | WRRRRDCASHHFAVSVTTIGSSRDPDAG SLPVHWSWRKERRSALYLHSSRSRHRRT YPRDRRRRAFVFWQPRCWLAAHLSGHPT GGCT*NRSHQLGTSQLTLRCVQNHRCR RCRSSDRPLRLVLSWHARKYQTPGRGCE R |
| 3928 | 11979 | A | 4865 | 1 | 2799 | |
| 3929 | 11980 | A | 4866 | 3675 | 4064 | VSSDQNRRCNRCYGRLPQGGCFSLWC QFSASKSYLSPSDL**W*/QLSPSASRLPL ASLTISSLSLSCAGSASFHS/RHIPORCTCR YLRFVGFVAFWAVW**HVDLFKSQLQGGKS |

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| | | | | | | AKKRQIAEKGRNYTQNP |
| 3930 | 11981 | B | 4867 | 1 | 2325 | MNLMEQPAKDQYLSTQGLPVLVNSLAR YPQEQALPTITNYFAASELAPAVARAFNKL KTLRENARSWLLKYPEHALTGLLPAALG KAGEAQDNARAALRMLTENGHPQLQEQ IARRYNOPEVTDVAVNALLALDPLDNHPT KIPTLPFYQPSLWTRPVLKANAQSLPDS ALLHLGEMLRFPQEEALYPGLLQVKDVC SADSLAGFAWDLFTAQWATAGAPSKESW AFTAESFKRRQTRKEIFLSRMEQILPWQ NMVEVIEFFYPKAGNGRRPYPLETMLRI HCMQHWYNLSDGAMEDALYEIASMRL FARLSLSDALPDRTTIMNFRHLEHQHL ARQLFKTINRWLAEAGVMMTQGLVDA TIEAFPSSTKNKEQQRDPMEHQTKKGNO WHFGMAHIGVDAKSGLTHSLVTTAAN EHDNLQNLGHLHGEKQFVSAMPATKEP QREELAEVDVLLIAERPGKVKTLLKQNP RKKNKTAINEYMKASIRARVEHPFRIKR QFGFVKARYKGLLKNDNQLAMLFTLAN LFRVDQMIQLPTYELSSGIGAVRRQAE DGTFAINSKRVRIMRQNALLLERKPAV PPSKRAHTGRVAVKESNQRWCSDGFEF CCDNGERLRTVFALDCCDREALHWAVT TGGFNSETVQDVMLGAVERRFNDLPSS PVEWLTONGSCYRANETRFARMGLGLE PKNTAVRSPESNGIAESFVKTIKRDYISIM PKPDGLTAAKNLAEAFEHYNEWHPHSA LGYSRPREYLRQACNGLSDNRCLLEI* |
| 3931 | 11982 | A | 4868 | 82 | 199 | |
| 3932 | 11983 | A | 4869 | 882 | 1091 | VCHAAPPLRTTATSVPAVPGAASDSGY AAQFAAYLAC*LRAAFPSGGIIITAASHPS SISFRQRTAGS |
| 3933 | 11984 | A | 487 | 77 | 199 | SKSRPIASNKIEAIKSLPAKKPQPGDFAT EFYQTFKEEL |
| 3934 | 11985 | A | 4870 | 3 | 274 | |
| 3935 | 11986 | A | 4871 | 2888 | 3076 | KTITNWRCSRWPTCFGRKT*YHWHQL LSMVRQLMVL SWKKISSWFMGPPIIRKSI LAENSI |
| 3936 | 11987 | A | 4872 | 1 | 2043 | |
| 3937 | 11988 | A | 4873 | 222 | 513 | PEGAPRTPGPLPRAPGRTSEGAGRRGGP LGPVVTMCLPRQLSYPDVG*AEGLPA LDPWPGHARGSEGP RRQGGAVLAVRLG GRVYVHLHTPGGQ |
| 3938 | 11989 | A | 4874 | 20 | 161 | |

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|------|-------|---|------|------|------|--|
| 3939 | 11990 | A | 4875 | 1 | 2251 | MAGVVGAGPLRAMGRQALLLALSHRRQ GLYFHIGETEKRCFIEEIDETMVGINYRT QMWDKQKEVFLPSTPGLGMHVEVKDP DGKVVLSRQVSGSEGRFTPTSHTPGDHQI CLHSNSTRMALFAGGKLYREERFRLTSE STNQRVLWWSIAQTVILJLTGIWQMRHL KSFFEAKLKRVAALLSSAMEDSEALGF EHMGLDPRLLQAVTDLGWSRPTLJQEKA IPLALEGKDLLARARTSGSKTAAYAIPM LQLLHRKATGPVVEQAVRGLVLPVTKB LARQAQSMIQQALATYCARDVRVANVSA AEDSVSQRAVLMKPDVVVGTPSRILSH LQQDSLKLKRLDSELELVDEADLFSFGF EEELKSLKCHLPRIYQAFILMSATFNEDV QALKELJLHNPVTLKLESQLPGPDQLQ QFQVVCETEEDKFLLLYALLKSLIRGKS LLFVNTLERSYRLRLEQFSIPTCVLNG ELPLRSRCHISQNFQGYDCVATDAEV LGAPVKGKR/GAEGPKDKASDPEAGV ARGIDFHHVSAVLNFDLPPTPEAYIHRAG R**CDGPGICMTARANNPGIVLTFVLPT QFHLKIEELSGENRGPILLPYQFRMEEL EGFRYRCRDAMRSVTQAIAREARKKIK EELLHSEKIKTYFEDNPRDLQLLRHDL LHPAVVKPHLGHVPDYLESKVPPTAQL QAQRKETQTHSQALLRLGLSGAEHIVE HRLTPFVDRRGSGAYCTA |
| 3940 | 11991 | A | 4876 | 2 | 2318 | |
| 3941 | 11992 | A | 4877 | 866 | 1150 | |
| 3942 | 11993 | A | 4878 | 417 | 872 | |
| 3943 | 11994 | A | 4879 | 3 | 282 | |
| 3944 | 11995 | A | 488 | 29 | 380 | SETPOAFTLPTQGSLEGEERMEDIRTLT VALFTLICPGSDEKVFVHVVRPKKLA EPKGSLEVNCSTTCNQPEVGGLETSID KVFACTEQAQWKHLLGSSNLSMDTVLA HCHFH |
| 3945 | 11996 | A | 4880 | 2 | 437 | |
| 3946 | 11997 | A | 4881 | 336 | 442 | |
| 3947 | 11998 | A | 4882 | 523 | 630 | |
| 3948 | 11999 | A | 4883 | 1 | 1004 | MAFWPHENSLLAPWPDLPFLAPNTANTS GLPGVPWEAALAGALLALAVLATVGGN LLVIVAIAWTPRLQTMNVFVTSAAAD LVMGLLVVPPAATLALTGHVPLGATGC ELWTSVDVLCVTASIELCALAVDRYLA VTNPLRYGALVTKRCARTAVVLVWVVS AAVSFAPMSQWWRVGDADAEARCHSN PRCCAFASNMPLYVLLSSVSFYPLLLVM LFVYARVVFVATRLRLRLGELGRFPPE ESPPAPSRSLAP/AFGYANSFNPPLYCRS PDRFSAFRLLCRCGRRLPPEPCAARPA LFPSGVPAAARSSPAQPRLCORLDGERHL |
| 3949 | 12000 | A | 4884 | 144 | 1423 | |
| 3950 | 12001 | A | 4885 | 1309 | 1702 | |
| 3951 | 12002 | A | 4886 | 1 | 648 | |
| 3952 | 12003 | A | 4887 | 1 | 1049 | GGGGTTFPASPVPRLHACLPAAPLRLP PSPARRAMPVAGSELPRPLPFAAQERD AEP RP PHGELQYLQIQHILRCGRKDD RTGTGTLSVFGMQARYSLRDEPLLTITK RVFWKGVLLELLWFIKGSTNAKELSSKG VKIWDANGSRDLSLGFSTREEGDLGP VYGFQWRHFGAEYRDMESDYSGQGDV QLQRVIDITIKTPDDRRIMCAWNPRLDLP LMALPCHALCQFYVNVSELSCQLYQRS GDMGLGVFPNFIASYALLTYMIAHTGLK PGDFIHTLGD AHYILNHIEPLKIQLOREPR PFPKLRILRKSS*RLIDFKAEDFQIEGYN PHPTIKMEMAV |
| 3953 | 12004 | A | 4888 | 437 | 851 | |

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|------|-------|---|------|------|------|---|
| 3954 | 12005 | A | 4889 | 1 | 1063 | |
| 3955 | 12006 | A | 489 | 27 | 406 | |
| 3956 | 12007 | A | 4890 | 496 | 701 | |
| 3957 | 12008 | A | 4891 | 875 | 1156 | |
| 3958 | 12009 | A | 4892 | 76 | 382 | |
| 3959 | 12010 | A | 4893 | 71 | 228 | |
| 3960 | 12011 | A | 4894 | 69 | 242 | |
| 3961 | 12012 | A | 4895 | 146 | 431 | |
| 3962 | 12013 | A | 4896 | 3 | 262 | |
| 3963 | 12014 | B | 4897 | 185 | 338 | MSTTFMGRSQATGGCVQTDTPGPFLLQ DTQQLSVVHPDIQLEVGFPGGGX* |
| 3964 | 12015 | A | 4898 | 69 | 303 | |
| 3965 | 12016 | A | 4899 | 260 | 881 | |
| 3966 | 12017 | A | 49 | 245 | 616 | NPPN*NPPNACVKPEFENQPKLKWQRG VGGPRREGPPAQAPEGTAGRRADKL RVGWRPPPATSAQGSAPPLFC*SSRSR GPSSPCLEAPTPGASPST*TIIPRRARR ACWTWPCSCPTPCG |
| 3967 | 12018 | A | 490 | 191 | 1074 | RLPEMSSFGYRTLTVALFTLACCPGSD KVFVEVHGEAKGSWAVEPKGSLLEVNCST TCNQP*SGVGLGDLSD*GFCWDEQVQ L/WKHLYLGFQTFSHDITVLQCHFTCSGK QESMNSN/VSALYQPPRQVILDTNPL GGFLGKSFHHLKLQGVPTVEPLGQP*PSF LVSVGNETLHYETFGKAAPQEAATF NSTADREDGHRNFSLAVLDMSRGGNI FHKHSAPKMLEIYEPVSDSQMVIIIVTVV VLLSLFVTSVLLCFIFGQHLRQQRMGTY GVRAAWRRLPQAFRP |
| 3968 | 12019 | A | 4900 | 373 | 491 | |
| 3969 | 12020 | A | 4901 | 1 | 232 | |
| 3970 | 12021 | A | 4902 | 3 | 701 | |
| 3971 | 12022 | A | 4903 | 3 | 1622 | |
| 3972 | 12023 | A | 4904 | 26 | 168 | |
| 3973 | 12024 | A | 4905 | 258 | 484 | |
| 3974 | 12025 | A | 4906 | 1121 | 1518 | |
| 3975 | 12026 | A | 4907 | 19 | 541 | |
| 3976 | 12027 | A | 4908 | 288 | 561 | |
| 3977 | 12028 | A | 4909 | 1 | 1857 | |
| 3978 | 12029 | A | 491 | 3 | 403 | SWSGSAAALRMRPVRLMKVVFVTRRIPA EGANLKVISTMSVGIDHLALDEIKRGIR VGYYTPDVL/TRYHRRTRSLPATYHLPV AGHGRGSEWWWTSWKPLWLCGYGL TQSTVGIIGLGRIGQAIARLLKPGF |
| 3979 | 12030 | A | 4910 | 81 | 414 | |
| 3980 | 12031 | A | 4911 | 1 | 507 | |
| 3981 | 12032 | A | 4912 | 519 | 858 | GLSEILAIGFCPHQVQRGLGKVLQSLA AQLPGPFTRLVHRRQSLHAVPKCIAHVP CSFTLHFLPQEGLRQPEFLAPWGLHLKA TPVWPFANRCCSILGAGGYFVQLTLGM S |
| 3982 | 12033 | A | 4913 | 67 | 467 | |
| 3983 | 12034 | A | 4914 | 2 | 307 | |
| 3984 | 12035 | A | 4915 | 1 | 2112 | |
| 3985 | 12036 | A | 4916 | 796 | 1018 | |
| 3986 | 12037 | A | 4919 | 512 | 625 | |
| 3987 | 12038 | A | 492 | 2 | 465 | DAAGANLKVISTMSVGIDHLALDENKR GIRVGYYTPDVL/TRYHRRTRSLPATYHLP PVAGHGRGSEWWWTSWKPLWLCGY GLTQSTVGIIGLGRIGAPTGLARPGSHS VVCIPGTCLCAEKTIMLSGHFACSRDIS NEGYSFVKHRRQIHK |
| 3988 | 12039 | A | 4920 | 206 | 366 | |
| 3989 | 12040 | A | 4921 | 504 | 690 | |

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|------|-------|---|------|------|------|--|
| 3990 | 12041 | A | 4922 | 3 | 336 | |
| 3991 | 12042 | A | 4923 | 22 | 129 | |
| 3992 | 12043 | A | 4924 | 852 | 1364 | |
| 3993 | 12044 | A | 4925 | 1 | 897 | |
| 3994 | 12045 | B | 4926 | 449 | 2578 | MLLECEEEAVCVIMCASVKYNIRGPALIP RMKTKHRIYYITLFSIVLLGLIATGMFOF WPHSIESNDWNVEKRSIRDVPVVRPA DSPIPERGDLSCRMHTCFDVPYRCGNPK NKIKVYIYALKKYVDDFGVSVSNTISRE YNELLMAISDSYITDDINRACLFVPSID VLNQNTLRKETQAQAMAQLSRWDRGTN HLLFNMLPGGPPDYNTALDVPDRALL AGGGFSTWYTRQGYDVSPVYSPLSAEV DLPEKGPGPRQYFLLSSQVGLHPEYRED LEALQVKGESVLVLDKCTNLSEGVLSV RKRCCHKHQVFDYPOVLQATTCVVLRG ARLQGAVLSDVLQAGCVPVVIADSVILP FSEVLDWKRAVYVPEEKMSDVSYSILQS IPQRIEEMQRQARWFEAYFQSKIAIA LATLQIINDRIYFPAASIEVEWNDPPAVK WGSVSNPLFLPLIPQSQGFTAIVLTIDR VESLFRVITEVSKVPSLSKLLVWNNQN KNPPEDSLWPKIRVTLKVVRTAENKLSN RFFPYDEJTEAVLAIDDDIIMLTSDLEQF GYEVWREFPDLVGYGPRGLHLWHEM NKWKYSESWTNEVSMVLTGAAFYHKY FNLYTYKMGPDIKNWDAMHNCEDIA MNFVAVNTGKAVIKVTPRCKFKPECT AIDGLSLDQTIMVERSECINKTASVFGT MPLKVWEHRA* |
| 3995 | 12046 | A | 4927 | 533 | 804 | |
| 3996 | 12047 | A | 4928 | 965 | 1109 | |
| 3997 | 12048 | A | 493 | 217 | 426 | TLVNMVEADVTRCLIRSGIRVGYTPDV LTRYHRRTRSLPATYHLPPVAGHRRGSE EVSERRPGAVAHGC |
| 3998 | 12049 | A | 4930 | 507 | 981 | CWRSTATCYQWVIKSA NRCTLVQVGTTR RTMDNGDERHSRCPGM*EAARSFIPT/ CQKTRH*RPVQORLRSNTAPIR/RRPSV HRPTGRESMPRTRPPEPELQTPLAATKR RSTSENASYS DALLRGLGKLSGKDREAR RGPRSRPGSRVQTAGAAL |
| 3999 | 12050 | A | 4931 | 1121 | 1272 | |
| 4000 | 12051 | C | 4934 | 178 | 360 | MGQELRHFGTVTWPMHRKMERRXFPRE QGFGXQLLPQWRGNEKTLGSAGRQGED HRLRAE* |
| 4001 | 12052 | A | 4935 | 409 | 516 | |
| 4002 | 12053 | A | 4936 | 288 | 573 | |
| 4003 | 12054 | B | 4937 | 1 | 1152 | MGSEAGCLVRAERFQLIVERDVRSSFFS WKELSMPGFIQKQARVYVQFFLADALI LPVPRPCLHSATPSTPQTDTPGEGPHLG QSRLFLLCHKEALMKRNFVPPGASPEV PKPALSFYVLGSLWGLGTQRKEGTGWL PEPQGNDDNDQKVHLIFFGSSVRWFEFL HPGQVYKLIAPGPATPMLFEKDSSCISR RPLELAGCASCLTVQDNWTLLESSQDI QDVLDAKNSPESSLTDLSDSKSHNVYC CFRSSTYVQVLSFPETTISILPHYLAE LQGGQSPFOATASCHIVSVFSLQFWVC AYCTISICKQSSARVDEPMTMFLWTLCTS PSVLRPVLSFELERKPSKIVPLGTPSRSS FQPFARAKGGK* |
| 4004 | 12055 | A | 4938 | 409 | 701 | KEVKVNWLLNLPKAQEFYGPSPLPA TLHLKLSRPFCKLQDH/CCCHMVIHTGH HIGFGSPLHQEPMSGRKYSRL |
| 4005 | 12056 | A | 4939 | 301 | 573 | |

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| 4006 | 12057 | A | 494 | 80 | 1058 | RCSSPAGYPPRCRVALARAADCEVEQW DSDEPFAKELERGVAGAHGLCLLSDH VDKRILDAAGANLKVISTMSVGIDHLAL DEIKKRGRVGYTPDVLTRYHRRTRSLPC SYHLAFLAGGLQGSEEWWTWSWKPL LWLCGYGLTQSTVGHGLGRIGPGPLIGV LKPPGVQRFLYITGRQPRSEEAIEFQAE FVSTPELAQSDFIVACSLTPATEGLC NKDFQKMKETAFFINISRGDVVNQDDL YQALASGKIAAAGLDVTSPEPLPTNHP LLTLKNCVILPHIGSATHRTRNTMSLLAA NNLAGLRGEMPSPSELKL |
| 4007 | 12058 | A | 4941 | 339 | 494 | |
| 4008 | 12059 | A | 4942 | 408 | 546 | |
| 4009 | 12060 | A | 4943 | 1421 | 1581 | |
| 4010 | 12061 | A | 4944 | 1 | 1113 | MHQEDLRAWYLDLGLPSHQNAQPTAW KCQRAPSPYTHQDMALIPSPTRARWLSPE KEPKQGEVGEKSLLPDPTLPLTDPRLTGS TEQAHAFGLAALMSALRVSHLOGRGGV VTLVDSQLGVIASVSTQFNKGPSYRLLA DVQNRLLPKYDSQKEAELRSWIKGFTGL SIRPDFQKGLKDGILLCTLVNKLQFGSPV KINVASV*NWH*LENLSNFLKAMVSYGM /NPVLDFFANNLFESGNNMQVRVSLAL AGKAKTKGLRSGVDIRDKYSEKQNFDD TTMKASQCVIRLQITNKCAQSQGMTAYG TRRHL YDPKNRILPPMDNSTISLQMGTN KCAASQVGMTAPGTQRHYDITKLGDICKCE NSSMSLKMGYT |
| 4011 | 12062 | A | 4945 | 272 | 902 | |
| 4012 | 12063 | A | 4946 | 281 | 470 | TGWSWSQCTPSC*TTMCVYTFMTYTWAW GCPPNHVQPHA*PVSPVTLLNVGFRAGA VFSOHGYL |
| 4013 | 12064 | A | 4947 | 1192 | 2248 | APSKKLRSATLRRPGSSKDTARGPVSVG WCPQSQEPFLGARCATSPWLCLRPSSVFS PRALAIRLGGSGSLSAGCAARLQGSVP CWPLARLSASATPLSELRQQAPPPRC DPGSRLSVPVAPCPAPRAPQPRRLPSPGP RFCRCPSLSVCRSLG/PVSPPPQFPLPCLP RWLARSLALGROETASQANPRNLCKKL AMKFKKFFDFGAIFEWSQSFSPSPRPVRF PLEPEGSPVPSLPERPSRHPASSSGRLQ DPGLILCSLCHYLFIRTDYAVVTRAGNG GECVWLOKFPVKLASLMMSEGLYIGHF LGVPPANPQEAPRTRSFPTKSVMEPSAV PGTAERVLHPG |
| 4014 | 12065 | A | 4948 | 654 | 730 | |
| 4015 | 12066 | A | 4949 | 1574 | 1881 | |
| 4016 | 12067 | A | 495 | 3485 | 4056 | DLPSRHRVMEACHVCCVRRGCCV/CAC /ICVCHMCSVWVRCVLCVPQVLCVHV ALCV/CVCCQLQCARVWCMCCVCSVLC MRCV/CVCPVRVLCVCCGCSRCVSW CVCCVCRVCLV/CACAVWCVCCMC/L CVLCV/CACACVCCVRCVSWCVRCV/ CVCCACSVWCVLCV/CVCMQCVCTV WCMCCVCCVLE |
| 4017 | 12068 | A | 4950 | 207 | 315 | |
| 4018 | 12069 | B | 4951 | 199 | 420 | MSLPIGIYRAVSYDDTLEDPAFMTPPPS DMGSVPWKPVIPERKYQHILAKVEEGEA SLPSPAMTSSAIDSVDK* |
| 4019 | 12070 | A | 4952 | 336 | 594 | |
| 4020 | 12071 | A | 4953 | 401 | 1301 | |
| 4021 | 12072 | A | 4954 | 388 | 681 | |
| 4022 | 12073 | A | 4955 | 272 | 452 | |
| 4023 | 12074 | A | 4956 | 256 | 381 | |
| 4024 | 12075 | A | 4957 | 58 | 301 | |
| 4025 | 12076 | A | 4958 | 562 | 1221 | |

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|------|-------|---|------|------|------|---|
| 4026 | 12077 | A | 4959 | 152 | 358 | |
| 4027 | 12078 | A | 496 | 1 | 858 | |
| 4028 | 12079 | A | 4960 | 184 | 361 | |
| 4029 | 12080 | A | 4961 | 2017 | 2406 | |
| 4030 | 12081 | A | 4968 | 1 | 396 | |
| 4031 | 12082 | A | 4969 | 67 | 180 | |
| 4032 | 12083 | A | 497 | 106 | 542 | GATLGGMSEHVEPAA/PGPGPNGGGGGP APVARGPRHPQFSTPTPLINVRDRLFHAL FFKMAVITYSRLLFPFAFRRLFEFFVLLK ALFVLFVLA YIHIVFSRSPIN/CLFHV RD KWPREGNPALWKVVRHNSSRAPVFLQ/PC DSGGR |
| 4033 | 12084 | A | 4970 | 2 | 415 | |
| 4034 | 12085 | A | 4971 | 1090 | 1203 | |
| 4035 | 12086 | A | 4972 | 3 | 356 | VQNRTLHFSLLYEPKRKSKPESYLICYKI FQDEPLAP*AFL*IPASLSQIQ*FTSRGKG ASQNLIVIVIKYSKMSLWPPEPSCCKYLP CLKSNSSQLSWLLWCVLVWGVGWKYC QGWGGPPLHLVSLWGGVYSASRWEDIGK QHISLRGVPGVIFIIYI |
| 4036 | 12087 | B | 4973 | 148 | 305 | MDNSASVEQLQETLLRALRALVLKNRPL DTSRFTKLLLLKLPDCGPFISLGHN* |
| 4037 | 12088 | A | 4974 | 484 | 927 | |
| 4038 | 12089 | A | 4975 | 2053 | 2615 | RGCPFGGRKAPFGLLFNVDQTVMFLSR TTYSLQELGAMGMDLLSAMFDFSEKL NSLALTEELGLFVTAIVLLYSADRISGME NSASVEQLQETLLRALRALVLKNRPLE TSRFTLLLLKLPDLRLTNMHSSEKLLVLS GWTAPVTPPRAGLSAGCPLCTESELCTS LSFYETEKEKQTRILFILL |
| 4039 | 12090 | A | 4976 | 173 | 520 | |
| 4040 | 12091 | A | 4977 | 44 | 213 | |
| 4041 | 12092 | A | 4978 | 840 | 980 | |
| 4042 | 12093 | A | 4979 | 72 | 464 | |
| 4043 | 12094 | A | 498 | 309 | 586 | NKNLEISFFETESRCCPRL/ECNGAISV HCNLCPLGSSNSPTS/ASQVAEMTGVCB HAQLIFVFLVAMVFIHLH/VGQGGLELLT SGGPPASASQ |
| 4044 | 12095 | A | 4980 | 1 | 132 | |
| 4045 | 12096 | A | 4981 | 99 | 212 | |
| 4046 | 12097 | A | 4982 | 84 | 196 | |
| 4047 | 12098 | A | 4983 | 2 | 186 | |
| 4048 | 12099 | A | 4984 | 87 | 347 | SLNFHIGQ*AQPHAGFGLRGSG*GPCPPCC QANAC*APEPNDMEDQAPGVRHPLSN VKIQGSE |
| 4049 | 12100 | A | 4985 | 176 | 1554 | |
| 4050 | 12101 | A | 4986 | 1 | 1863 | |
| 4051 | 12102 | A | 4987 | 1171 | 2784 | |
| 4052 | 12103 | A | 4988 | 176 | 464 | |
| 4053 | 12104 | A | 499 | 3 | 451 | |
| 4054 | 12105 | A | 4990 | 7 | 394 | HHELQYPIRFPCPKSCCKGRNSLQNKJYD LSLQNFPPATRLQNLA/SPRLECSGTISAP CNLHLPSSSDSPASASRVAGNAGMHCH KQQLFVFLVETGFIIHVAQAGLRTP*PCG SGPPRGPKSAGDLQ |

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| 4055 | 12106 | A | 4991 | 1 | 2201 | MTNLAMVERDSEAGTAASRFPGNHAAK GKAQAHYKVVWRPAEVRCLKLGPEWVT LRYTIKHPYKLCGRQHVFVFTSRSDV GFMLTTLKPGFSVSVESKMNNKAGSFF WNLRRQFSTLVSTRTMRCLCLGCKPKI VHSNWNLNFFHNRMQSTDIIRYLFQDA FIKSDVGFQTKGISTLTALRIERLLYAKR LFFDSKQSLVVPVDSDDLKKVNLNHEV SNEDVLTKEIKPNRISRRKSEECNSLSD VLDAFSKAPTFPSSNYFTAMWTIAKRLS DDQKRFEKRLMFHPAFNQLCEHMMRE AKIMQYKYLLFSLHAIVKLGIPQNTLVQ TLRLVTQERINECEICLSVLSTVLEAME PCKNVHVLRTGFRILVDQVQWKIEDVFT LQVVMKCGKDAPIALKRRLKALREL DRFSVLNSQHMFVLAAMNHRSLILLDE CSKVVLNHHGCLPRIMINILQCKDLQY HNLDLFKGLADYVAATFDIWKPRKVLFI LILFENLGRFPVGLMDLFMKRIVEDPESL NMKNILSILHTYSSLNHVYKQNKQEQFV EVMASALTGYLHTISSENLLDAVYSFCL MNYFPLAPPNQLQKDIISELLTSDDMK NAYKLHLDLTCLKLDVTYLRDIALSLP QLPRELPSSHTNAKVAEVLSSLLGGEGH FSKDVHLPHNYHNDFEIRMDTNRNQVPL PLSLDVGTTSATDIQRLTTYISAGLSEL KS |
| 4056 | 12107 | A | 4992 | 3 | 485 | LHILDTCLKLDVTYLRDIALSLPQLPRE LPSSHTNAKGGQRS*AALLGEGTTPSK DVHLAPHNYHIDFEIQNGTPNRNPAYP LSDVDTTSCLIQFKE*LCYVFPRSAyclG SSHPRGFLAMKMRHLNAMGFHVLVNN WEDGQTRDGRQSPFLKT |
| 4057 | 12108 | A | 4993 | 40 | 131 | ATKAFENEVYKTTLVVYCFCKVILKA SL*FRILLTEWFYMRWLKYYHIVCF/PLG DAKIFCFMYITVLFKTLEDSC*TLVVYCF FKCVILKASL |
| 4058 | 12109 | A | 4994 | 2437 | 2762 | GHILFWAQLFPASFFFFF*DGVSLLCCPG WSAVVRSQLTASSASRVQAILCLSLPSS WDYRHLPPCLANFFVFL/CRDGGFTMLA RLVLNS*AS*VHPPWFPQSAGDY |
| 4059 | 12110 | A | 4995 | 1 | 299 | FSLIKISMMLLMKMEK*NLQFIW/KPRRL QIAKARLNASSSSSSSSSSSSSSSSVVW YWHKKRHIDHWRNLNENNRHICSQLI LTKVPGANTKDHP |
| 4060 | 12111 | A | 4996 | 3 | 358 | |
| 4061 | 12112 | A | 4997 | 76 | 386 | VLPPSSPALHSPAPPSTCPYLPGA/PPPLL PPCAGRSPAAAAAPHCPAPCARH*GSR* LESAPAGPQPSRAARMPA/WPLPPAPPTD PTAPPAPRSHWPAAPPT |
| 4062 | 12113 | A | 4998 | 66 | 381 | VLPPSSPALHSPAPPSTCPYLPALP/PLE/ GPPSRKPPRTFIGNPGQGPGVSPIVLRS PSQPH*PGNQGPCPSSQPPGSPRSEHG* HRCWALYGOQEKPAAPS |
| 4063 | 12114 | C | 4999 | 36 | 236 | MGPTIPDXSXFWRKPTITWMPTEGTSN VGQPLSSSKSLHSXRGHPAPIPTGQAGP RDSQPGASP* |

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| 4064 | 12115 | A | 5 | 105 | 1711 | VESNTGRKWTEAAGTGDQCLAWGSSG DGRGGDPRGRVPAALGAADVVAAMAS PDPWAPGPKQGLMGRPGSSPALWAQ/ PA*PPY/FPGLTPCPQOEVPQSFPGP/EGQ RVLRGQGNVT*GEGRVVQVCGRRP/PCPS LMEPFVYTPASPFPSQPGQTPGRRQDG EPRLGTGGQTGSPGGLVSGPRGRAAKP GGTQGGVLVRQVPPGEHPTGEARI*HLG WVGCP*RMGQGNFVASKPFLDL/PGPM LGSTNCNLSGSFGLS/GPMFPKWPSTGR LPKGPSAN*GG/PMERPPGVMPSS/GHQ DPEASGPLDLLVRAALQGG*ALGHK/GG AS*TSQKAESLPQPLGPPGGGCGYGTQNP LASGPKQTWSMGRPGSFPALWAQNRLT FLTPRPSPPCPQEVTPQSFGPP/GPSQGAER RARLSRPRERGFLKVCGRRP/PCPSMMMEP SCLHTC*PLSLPASLRQAKEPPSCGLRAP S*HLRRPCLTPPFRPQGLLGTSHCPQKPA PDSGLLHSLNSPRGFSQCNPRRLHPQL NPSNRDR |
| 4065 | 12116 | A | 50 | 96 | 547 | ADPAAPVPWFGPSQFGARAQWPGLLGP AAPPPALCSP*TDSGVDQVSNAPVWN SQQWWRQ/PAATEKPPATKAPGLLVQEK YKVS*QKGW/PSTKKAQGYFP*NCPL QFLLPPLSLPGDISQCPHLKPLIPP/PS YPAPCPGFCPR |
| 4066 | 12117 | A | 500 | 2 | 493 | GLEFGTSHRLRENPPMVAVSCPIKTNVK GPPGKVGAGHAGEYGSEALERMLFSF T/TKTYPPHFDLSHGFAQVKGAATAK A/DALTKAVANVDDMPINGAVRPEATL HAHKLKRVEPVNFKLLKPLACLVDPCPA HLPGRVSPLAVARLPWNKVSWAFCQOI |
| 4067 | 12118 | C | 5000 | 231 | 521 | MRAPVQSQSVYFTQTSLKPTITVPGRC DAFQVTNNKLAQATQSEGVAGASNPD ESHEPAHGMQREFSGVTAVSQADTVMN YPVSNWENRGSG* |
| 4068 | 12119 | A | 5001 | 46 | 1438 | LSTPTALVWPGHRPP*PIP*WPLCPQEGG PGGLPRGWSSGTIVAP*S*AGCGEKGQS YPQGSASWSEPAPSPS/PAFPAFLMLNC SGPLALSLSGPKWAREQL*CVPPRALAT GLPLEVWL*LRPFPWP*CLPPPG/PWVQL LHSLSSCWGPPMPRTIRGIPPGSICRLCF CPAAGLPPWWLSGQLPHPPGTPLCSVS *GGPDQPLLCSPWAPGLSSTALCHSRL VLPAPIPVVTWPSGLSTT/PAAGATPT PAACFQVQPSAPDKPLLVSPPAKHIPVP PPVGLGLRAMDR/PPGPIPETRDLPCHP TPPKSKLQARGPWPGWVD*TTSGW/KLR KEALMGPTIPDKSSSWAGPLVSLPLV GGNPSPWNALRGKRDPRKCGNPQPPSPK LRKSPPTA/PKTPAPYSPREKAGPQKTL GPRGPPP*SRDPPL*LRITADPGVRTRGA GPPAPPRNP |
| 4069 | 12120 | A | 5002 | 1 | 874 | LDDALESCDEHGYRTASSCLRKGMVM KSSNRELVSRYTDIT/SGSTSEFFDWA AGQRGSSHPRRWAARQRSSHLFYSEP DTDAKHQDDALTEET*G/SRSASCAHW L*SNCCATGSSLLPLT/SRL*LPMAVK SSRASAALPSSRFSSWHIRACASPAAT AASAWGLSSNIPSGPAGCAPRPTFS/L PGALPTTTRRRRISSDRSRSPSGLTSAR ESGSKSPPOG/TARDSQALRSAMVTKTS WRMELDRECGRSSCTSTFCVSAASRGFL LQTSFRWE |
| 4070 | 12121 | A | 5003 | 1 | 2487 | |

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| 4071 | 12122 | A | 5004 | 227 | 219 | RCRKEMFSLCWAYYCI*KLQIQPMRLAP LPTLDPV*SP/GGASTATNSGSSVTS TATISGSSVTSNGVSIIVNSEHTTSSGIG TATNSESTPSSGSIATATNSESTTSSGAST ATNSESTPSSGASTATNSDSTTSSGAST ATNSDSTTSSASTATNSESTTSSGAST ATNSESTVSSRASTATNSESTTSSGAST ATNSESTRTNSGAGTATNSESTTSSGAS TATNSESTPSSGAGTATNSESTTSSGA GTATNSESTVSSGISTVNSESTPSSGA NTATNSESTTSSGANTATNSDSTTSSG ASTATNSESTTSSGASTATNSESTTSSG ASTATNSGSSSTTSSGTSTATNSESTVSS GASTATNSESTTSSGASTATNSESTVSS GASTATNSESTTSSGANTATNSGSSVTS AGSGTAALTGMHTTSHSASTAVSEAKPG GSLVPWEIFLITLVSVVAAGVFLAGLFFC VVSACVPLCECRDALKMPGGLEQLLIES RIVHWGTGRIPIATBEGWVLLAMKIRL AAEAKIKCFDGMAGLRSSLSRLGQ AFALPTSTMGGAETLLSSQTGSRFNR GLFSLRLRWAAQORSLTS |
| 4072 | 12123 | A | 5005 | 124 | 670 | FQRTKLLNGPGDVEGTSTVTPQKKWLH VISPIFVQSLTLPFLAKWGDRQLQLQIEL AAREVSDI*EETV*NETYLLLLCSRKTLD TLKWAHSIPYARLFYI**FSCSLKLAFSQ FLLPADPYGVAVGGTVGHCLCTGLAVI GGRMIAQKISVRTVTIIGIVFLAFAFSAL FISPDGSG |
| 4073 | 12124 | A | 5006 | 3 | 273 | AAAPGNGRASAPRLLLLFLVPLWAPAA VRAGPDEDLSHRNKEPPAPAQLOPOPV AVQGPEPARVEVSGPGWGERGCRAGC AEYQAPGL |
| 4074 | 12125 | A | 5007 | 2 | 986 | AAAAPGNGRASAPRLLLLFLVPLWAPA AVRAGPDEDLSHRNKEPPAPAQLOPOP PVAVQGPEPARVEKIFTPAAPVHTNTE DPATQTNLGFHAFVAAISVTVSELGD RTFVIAAIMAMRYNRPGPCWAGAMLCL/ AGLMTCLFSVLFQYATTVIPRGLYLMF QPVLFAIFGIRMLREGLKMSPDGQEEL EEVQAIELKKKDEEFQRTKLLNGPGDV ETGTSITVPQKKWLHFIPIFGQALTLTF LAEWGDRS*LTITVLAAREDPYGVAVG GTVGHCLCTGLAVIGGRMIAQKISVRTV TIIGIVFLAFAFSALFISP |
| 4075 | 12126 | A | 5008 | 2 | 439 | |
| 4076 | 12127 | A | 5009 | 3 | 366 | RDSVVEILFEQDNKEQSVATILDSLIQCP IDTRKQLAENLMMFDFVGKTQPLPKRA FSTEK*KFD*/TNLASYQIFNL*ANCTK YVGCVFIEDYSGSESILCLLFALIYNSPFD VSLV |
| 4077 | 12128 | A | 501 | 24 | 452 | APSPDAMG/HSWGKVNVEDAGGETLG RLLVYVPWTQRFDSFGNLSASAIMON PKVKAHGKVL/LSLDAIKHLDDLKGT AQLSELHCDKLHVDPENFKLGNVLT LAHFQKEETPEVQASWQEMVTGVASA LSSRYH |
| 4078 | 12129 | A | 5010 | 387 | 446 | |
| 4079 | 12130 | B | 5011 | 16 | 348 | MVLDCGYRESILVPIYEGIPVLCNWGAL PLGGKALHKELETQLEQCTVDTSVAKE QSLPSVMGVSPEGLVEDIKARTCFVSDL KRGLKIQAAKFNDGNNERPSPPKC* |
| 4080 | 12131 | A | 5012 | 1 | 595 | MGCRPVGQAGLELLTSARTCFVSDLKR GLKQAAKFNDGNNECPIDTRKQLAENL VVIGGTSMLPGFLHRLAEIRYLVEPKY KKALGKTFRIHTPPAKANCVAWL/G/GK VFVGI*QVEYAMKAVENSSTAIGIRCKD GVVLGVRKISPF |

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| 4081 | 12132 | A | 5013 | 3 | 461 | YIEDDMNPFQGNLEVEQRPKSKTFL*QG AAEQIKHILANFKNYQFFIGENMISDGM WLLLDYVKGWVCPYPMIFKDGDLMD KMLNKGKGLFWIYHPIHINWASALSSH TTTRDLRQNWTDCHPGALPILDWGFYL GVGGHCIFYEKPCCPW |
| 4082 | 12133 | A | 5014 | 3 | 325 | RRVSSVTQAQGVQWHGLGSQPPPPGFKL FCLSLPRSQDYRCMPRPANFC/IFL/VEIG FHPAH*DKLVSNS*PCGPPAPASQAGIT GV/THRAHLPNCV/C*LDLHHHV |
| 4083 | 12134 | A | 5015 | 1593 | 4449 | PSGLGNTCIYRRGPILPNSHRHAARGRIS ADRRFRHLGHRELHPAPCVPRGEGEHPA PCVPGHGHLPALCVPRGGQLHSVPICP GRGEPH/RCTILCPRSWA/RCTLHPRLDRF NRIREIQGAFRRRLRNLNTLLNNNQIKRI PSGAFEDLENLKYLVLKNEIQSIDRQAF KGLASLEQLRLDSNTLHCDCEILWLADL LKTYAESGNAQAAAIICEYPRRIQGRSVA TITPEELNCERPRITSEPQDADVTSG |
| 4084 | 12135 | A | 5016 | 1 | 3174 | |
| 4085 | 12136 | A | 5017 | 1 | 4759 | SRPWRLRASERPSAFSAMAAYSRSRGPR RCLLALVFCAWGT LAVV/AQKPGAGCP SRCLCFRTTVRCMHLLLEAVPAVAPQTS ILDRLFRNIREIQGAFRRRLRNLNTLLNN NQIKRIPSGAFEDLENLKYLVLKNEIQSI DRQAFKGLASLEQLYLFHQIETLDPSDF QHLPKLERFLHNNRITHLVPGTFNHLES MKRLRLDSNTLHCDCEILWLADLKTY AESGNAQAAAIICEYPRRIQGRSVATIT |
| 4086 | 12137 | A | 5018 | 2 | 267 | ADLSAEAL*TRREWDDIFKVLKTS/LGQ PKILYPSKLSLINEASSSSSSSSS/REFTT RLVL*EMLKGILHMEAQQGYLPS*KHTK V |
| 4087 | 12138 | A | 5019 | 1 | 164 | TRVNEHQIESKAA YALFYKRQDVARLL SPAGS/GAPASACSSPPSEFMDVN |
| 4088 | 12139 | A | 502 | 38 | 557 | APSPDAWMGHFTEEDKATITSLWGWKVV EDAGGETLGRLLVVVYPWTRQFFD/SFGN LSSAFCHPWATPKVKAHGKVLTS/LGD AIKHLDDLKGTFAQA*SETALVTKLHV GS*RTFKLPGEMLLGDPLGNPIFGKRISP LEVGRLSWAERWVTWSWPVALVPLRPL LKLNC |
| 4089 | 12140 | A | 5020 | 1 | 712 | EILIHLLKRFSYTKFSREKLDITLVEFPISG ARERMAGORQGKEGVVYQ*PSPH*QDL DFSEFVIQPNESNPELYKYDLIAVSNHY GGMRDGHCMCAVGGACPGSGGGGD QDLPSE*LGM*ASGEGSSVVGRK*TRSEI WTLSEARKGRRG*LSFPFR/TTFACNKD SGQWHYFDDNSVSPVNEHQIESKAA YV LFYQRQDVARLLSPAGSSGAPSPACS SPSPSEFMDVN |
| 4090 | 12141 | A | 5021 | 3 | 3090 | IFLLQLLLRRLWRRHGRWTEDEPQHEE LPGLDSQWRQIENGESGRERPLRAGESW FLVEKHWWYQWEAYVQGGDQDSSTFG CINNATLFODEINWRLKEGLVEGEDYVL LPARAWHYLVSWYGLEHGPPIERKVIE LPNIQVEVYVPELLVVRHNDLKSHTV QFSHTDSIGLVLRTRERFLVEPQEDTRL WAKNSEGLDRLYDTHITVLDAALETGQ LIIMETRKKDGTWPSAQLHVMNNNMSE EDED |
| 4091 | 12142 | A | 5022 | 1 | 1584 | |
| 4092 | 12143 | A | 5023 | 1 | 3519 | |
| 4093 | 12144 | A | 5024 | 3 | 673 | |
| 4094 | 12145 | A | 5025 | 3 | 2383 | |
| 4095 | 12146 | A | 5026 | 2 | 2348 | |
| 4096 | 12147 | A | 5027 | 1 | 7338 | |

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|------|-------|---|------|-----|------|---|
| 4097 | 12148 | A | 5028 | 2 | 7106 | KSKRQAQQMVQPQSPVAVSQSKPGCYD NGKHYYQINQQWERTYLGNNVLYCTCYGG SRGFNCESKPEAEETCFDKYTGNTYRVG DTYERPKDSMIWDCTCIGAGRGISCTIA NRCHEGGQSYKIGDTRWRPHETGGYML ECVCLGNKGGEWTCPIAEKCFDHAAG TSYVVGETWEKPYQGWMMVDCTCLGE GSGRITCTSRNRCNDQDPASRYRIGDPW SNKVHRGNLLQCUCTGNARGEWKCEKH TSVQTTSS |
| 4098 | 12149 | A | 5029 | 1 | 389 | |
| 4099 | 12150 | A | 503 | 318 | 449 | ERKKKKMATVQKGM/PHKYHHGKTGS YNNVQHAVGNAVNTNRTRGS |
| 4100 | 12151 | A | 5030 | 2 | 554 | ADALGRPTPASPQSRCTRSQSVGSPGFG GGHGRGE/SGRAYVWQPPYGSSE/HASGL RYWRSRLRPAAGSFAAVCSRSVASKTPV GFIGLGNMGNPMAKNLMKHGYPLIYD VFPDACKEFDQAGEQVVSPPADVAEKA DRIITMLPTSINAIEAYSANGILKKVKK GSLLDSSITDPAVSKELA |
| 4101 | 12152 | A | 5031 | 1 | 1123 | MGNPMAKNLMKHGYPLIYDVFPDACK EFQDAGEQLCPNLDVNHFPQRLHAAD TPWPISHLLAASVIGCCDIACLSGRVIS SLCVTISSQADEVRKENKPIPOHPKTIA EMLVVSSPADVAEKADRIITMLPTSINA EAYSANGILKKVKKGSLLDSSITDPAV SKELAKEVEKMGAVFMDAPVSGGVGA ARSGNLTVMVGGVEDEFAAAQELLGC MGSNVVYCGAVGTGQAAKICNNMLLAI SMIGTAEAMNLGK/S*GFDPKLLAKILN MSSNGRCWSK*HFNPVPGVMDGVPSA N*LFVRVDFGTTLHLWKDLGLAQDSATST KSPILLGSLAHQIYRMMCAKGYSKKDFS SVFQFLREEET |
| 4102 | 12153 | B | 5032 | 13 | 441 | MEGVEEKKEVPAPVETLKKKRRNF LKIKRLKKFAQKMLRKARUKLIEYKAK HYHKEYROMYRTEIRMARMARKAGNF YVPAEPKLAFFVIRXRGINGVSPKVRKVL QLLRLRQIFNGTFVKLNKASINMLRDCR AIYCMG* |
| 4103 | 12154 | A | 5033 | 1 | 775 | RRVPAVPETLKKKRRNFELKIKRLRK KFAQOMLRKARUKLIEYKAKHYHKEY RQMYRT*NFIEWARMGKKKANFYVPA EPQJWRFRVIRIRGUNGVSPPKGSERFQLL RLRQIFNGNL*KLNQOQFRNMAEDP*S PYIAMGCTPNLKVSXKMN*SYKRLGWAK SNKKRVALTDNALIARSGLKIRHILAW DLIHEYTVGKRFKIEANNFLWPKLSFS TKVEMKKKTTHFVEGGDAGNRREDQIN RLIRRMN |
| 4104 | 12155 | A | 5034 | 193 | 384 | |
| 4105 | 12156 | A | 5035 | 96 | 1636 | ARSPAMAPLPLILALLA WVADQES CKGRCTEGFNVDKKCQRDELCS/YQSC CTDYTAECKPQVTRGDVFTIMEDEYTV YERLGEENNATVHEQVGGPSLTDLQA QSKGNPEQITPVLKPEEEAPAVEVGASKP EGIDSRPETLHPGRQPPAEELCSGKPF DAFTDLKNGSLFAFRGQCYELDEKAV RPGYVPLNRDVWGIEGPDAAFTRLNLF RGRPYLFGK*QYV/RAFEDGVLPWYI PRNISWTAFDGHSPGQTWDAAALGLPCP LAYSGRERVYFFQRGKQYV/ESYQFPG TSPVQEECEGSSLSA VPEHFAMMQRDS WEDIFELLFWGAERSGWVTR/QPQFHL AGEWGHVGPQGVDAAMGGRILHLQG MATRPLLPWKKKRFRHRNRKGYRS/Q RAHSRGR*PETPRRPSRAWMLSVLPS EESNLGA/NNYDDYRMDLALCLPTCEPI QECFFSFQDKYYRVNLRTRRVDTVDP |

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| | | | | | | YPRSIAQYWLGCAPAGHL |
| 4106 | 12157 | C | 5036 | 1 | 300 | MRSFGQLTLCPRNGTVTKGWRGSHVVG LL1TLNFGDGPDRNKTRTFQATVLGSQM GLKGGAGSVWLQAAGLGLPASLLWPS LLCHCYVLPAPGVPVLP* |
| 4107 | 12158 | A | 5037 | 359 | 1229 | MPQPPTLQEMTGPSQPWTGKGLPGP* QLRAKAEVDSHLGRKKIKQNRKSC |
| 4108 | 12159 | A | 5038 | 2 | 311 | VRWNSAAPLVTSRGAPASARPRGQALP GGSAFSAHPGQLPGRAGAPVSGPPPTS GLCHFDPAAPWPPGLGLGMLPPHPQDW PAQP*HPPGLGLFFEIFSAS |
| 4109 | 12160 | A | 5039 | 310 | 415 | SQYFGTLRRVDHLRSGVRDQPGQLGKTP S*PQVIHPPQCPKVLGLQYYHFLFLRRS LDSVAQAQGVQWRDLGSLQRPFGTPTF SCLSLPSSWDYRRPPRLANFFVFSVETG FTVSARMVYSIS*PRDPPASASQAGDTG VSQAPV |
| 4110 | 12161 | A | 504 | 1 | 467 | DHSSSPAREQNWMENEFDELTEVGFRR WVITNSSELKKHVLTOCKEAKNLEKRLG ELLTRITSLEKNINDLMELKNTARELHEA YTSINSWINQAERLSEIEDQLNEIKRED KITEKMKNSTTVRVAASMOSKLGVA EEGPLRLTRSAFSA |
| 4111 | 12162 | A | 5040 | 1 | 114 | ARAEMLIVQYLRLTHCAITLFIISLLT *VMLLSS |
| 4112 | 12163 | A | 5041 | 335 | 477 | TPASLKIPVE**NTLLAKMVSIS*PRDLPA SASQSAGITGVSHRAC |
| 4113 | 12164 | A | 5042 | 135 | 804 | GIDTILTLNQNS*SLKTRQ*FTLIF/IFFFL RWSLALSPRPDCGLQWRDLGSLQAPLP FTFSCSLPSSWDYRCPPRPANFFCNFF FSRDGGFTVLARMVYSIS*PQ/CDPTLAS QRAGUTGLSHCTRLFFF*WMESPVTQA GIQWHDLGSLQPMPPQFR*FWSLSPSSQ DYRCMPQCQANFICFSRDEVSFC*PGWS GSPDLVIHLVPPKVLGLHA |
| 4114 | 12165 | A | 5043 | 63 | 361 | |
| 4115 | 12166 | A | 5044 | 151 | 384 | |
| 4116 | 12167 | B | 5045 | 385 | 479 | MAGAFRRRFASEVRAQGLESILEHGLRC AGSLRGQSLPTIMWSPVKVGE* |
| 4117 | 12168 | A | 5046 | 3 | 698 | VFFFFSGCTRGPLFESDFHRAHPRCGQG LAAP*AGAPQPRAPGETRGEPAPHWR SASGDKPPGQAAPPALVPGEGPSWSD PRGHRCQATLPRVLAGPLQ*LS*LSL* DPPELRSL*PPL*LRLL**SLEPP*PPLLDS NRFP*PRSPPLENPRPRPRKPRPP AEPPTYPTESVSDLLPAWSTRISVHLQTS HSWPSWASLASSMFFKVTCPNSRELWSS |
| 4118 | 12169 | A | 5047 | 138 | 550 | FCCCFTSSEHSLAYGSCSPRREVLCAQ QNPSETQAAPLASVYMWK*PCNSRLKGP GPGLEGWPESTRMTSGVTVPGGTSPGT RAGGSVPCGGLSPEALRQ*GAGSGPRVS PGA/PGCGAPAAAYGAASPCPQRCAL |

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| 4119 | 12170 | A | 5048 | 2 | 555 | FFFFFLGAHVVALYSNPTFTGLHIVVGKD WPPP*AGAPQPRAPGETRGPEPAPHWR SASGDKPPGASGLQLLFGQEVPPGDS*PP QRSSLLALRPPFPRVLGPQPPAKAKQR YSQRFPQGSQALAPP/GPPRKQPQLRKVS G*SGGCDLRLRHRPACPRVCTLAQLEP ATRMGWSYVGGQCG |
| 4120 | 12171 | A | 5049 | 1246 | 1379 | RCLFILSFTTGRRTHTP*PPLGLRTGFP* PRSPPPSREPTGP/RPRPREESOPPRQ*PP RVPHVIGLSDDLPAWSYSGS/GRPSTGLPI /PWPSWHP*RRQCSQR*QTQIPEISGSPCL SQPPLQRSVRTLRRPAPATA/PLVSKLSPP TKSLPSSDAMRPLSRAGP*RKQEDSAPQ/ DPEPPRNRGPGN |
| 4121 | 12172 | A | 505 | 1 | 1140 | |
| 4122 | 12173 | A | 5050 | 207 | 251 | |
| 4123 | 12174 | A | 5051 | 335 | 419 | TFDFPNWRSYFMSNWNITSLPTLLSSWD/ YRHVPLYPKACIFSRDRVLVYPWG*SHD FTLFVSMITLTIQYKMTKLDNYLETIYY |
| 4124 | 12175 | A | 5052 | 68 | 399 | WELLIYFSGHTCSNLSPLLSFFFF*DS LAVSAPGVQWHDLCSLARLPPFRKRFW CLSLLSGWDIRHVVPQYPAKICFSRDRV LPILAKSRNVSLTLNMLGGFS |
| 4125 | 12176 | A | 5053 | 2 | 322 | AFHHFFFF*DGACSVTLRECSGITTAHCN FRHLGSSNFPASTSRVVITGTCHHT*LI VFLVETGFHHVGQAQGLELLT*VHPPQS TKVLGLQVVSCHCTRPLSDF |
| 4126 | 12177 | A | 5054 | 16 | 357 | TITIGONFFFFLEMGSCSVARLECSQIS AHCNKLKLGSSNLPSTIS*VAGTGTGCA TIPSYFYNKISM*NQSLPMLPSLGLLELG LRPVFLRPPKVLGITRHEPHSALK |
| 4127 | 12178 | A | 5055 | 2 | 346 | LRWSL/DSVAGQGVQWHDGSLQPPPPG FKRLSGLSLMSSWDYRPPPLANFLHF **RRSFTMLARMVLIS*PHDPASASQSA GITGVSDHAQSQIFLKLQMTKSMGFKTK FLN |
| 4128 | 12179 | A | 5056 | 3 | 401 | FFFWRQSLTLVTQAGVQ*LDHGSQPLPL PGPKGFSHLSPPSSWDHKAHAPHLANFF L*RHGFTM/RVLVLTSLPQ/CDPPAAASQS AGITGVSHCAQPVIFCKKLDFFSSTIDIFPS NLQPRGFWDLTAPQGEIVST |
| 4129 | 12180 | A | 5057 | 142 | 250 | PPTGSLLTPPLWDPQFASLFGNGL*WERE *PLPQNV |
| 4130 | 12181 | A | 5058 | 2 | 775 | RCNSAQQOMTSSQKALMELKSLQEEP VEGFRTILVDESDLYNWEVAIFGPPNTLY EGGYFKAHKFPIDYPSPTFRFLTKM/ WHPNIYEEWEMYGISILHPPVDDPQSGE LPSEWNPTQQCEGLILRC*SHWLNPEP QHLSPQMSDASVMFRKWERQ*REKTK EYGLKFIRETKFSAT*GPKAGKGWGVG SPTNPGREYCIKTEVP/RNDEQVQSLLYD ELGMMTDIDDER*GRRKDAD/CYDDDEF WGMRPK |
| 4131 | 12182 | A | 5059 | 1 | 571 | ALGKAGYID/KYVTAMGIVAFVFFRSGK YNLDFRSRNDP/ARHI/TPEQLVALYKSI REKH*VFDP*GLVQRTLSLVLVCLKN/ SFDCCDREVWKKFTANACLQEAQNDLT VINLRHIAEAVDENS CNFLQTLVD*IAK LIQSNW*GIMVSHYSLT*NTPIAILVKHCT G*/INTGAPC*SEPLARYKELSF |
| 4132 | 12183 | A | 506 | 1 | 2640 | |
| 4133 | 12184 | A | 5060 | 32 | 534 | GRERPLLSPYMETLYRVPFLVLECPNLK LKKPPWLHMPASMTYVALVVSFYFLT GGIIVDVIVEPPSVGSMTEDEHGHRPVA/ LGLOSKMDNNIN/GKGLCQAS*FTMGGF RFS*ILDPIECKYPKTSDSFFCSIGISSV VLEFFPWARSNSMRNGNCPGLI |

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| 4134 | 12185 | A | 5061 | 1 | 328 | FLKRQRFGFLVAQAGL*WHNLGSLQPLPP GFK*FSCLSLSSWDYRHLPHPPNPLLF LVETGFYHIFGQAGLKLTD/SGDPPALAS QSAGIIGVSHRAGPGLCTFSNHI |
| 4135 | 12186 | A | 5062 | 2 | 687 | GRVGFNVWRDRNDTNLIPNGSSITVNTQ NKRDRYVSKYINYIFNDSVKAVYEEFRRG FYKMCDEDIKLFHPEELKDVM/LGNTD YD/WEN/NEKNARYEPGYNSSHPTIVFW KAFHKL/TLEKKKFLVFLTGDR/LQMK DLNNMKIT/CCPESWNERDPIRALC/YP VSLLPSPKYSYNGNS*KKRFKPKNNNR GIWLTSLPCPNLILLLL/SL/LL/LL/FLY FVLF |
| 4136 | 12187 | A | 5063 | 1 | 525 | ISHDAIAQESKRYWQNLEAVPQAQVLG NQIMPGLN/MKIKFVCRPQCEPKRSKSIE PDKNRKYCSAKARHSWTKDRRAMRV MSY*RRKWMNIRPLPTKKQMFLOF/LC NHIASGKKCQYVGNCSFAHSPEEREVVT YMKENGQDMEQFYELWLKSOQNEKSE DIASQSNKEN |
| 4137 | 12188 | A | 5064 | 735 | 1517 | SYSYTFIQLCNHIASGKKCQYVGNCSFA HSPEEREVWTYMKENGQDMEQFYELW AQESKK*KK*RHRPVS/PNGK/WENQIH MANRIMAGRLQWDFSLAGMCGGKTGN SEKQWQGHISSEKHKEKV/FHTE/DQYC WQHRFTGTGYFICDRYMNGH/AQOEGNS CK/CLHMGNARTFMEWGRKGRRLPLKV EASTKHKRDLHIGPK/DNDFGKYSFLFK DLN*YAGFYGMIPNQSIDQKNLKCEAH SRGAARFACIGVYRS |
| 4138 | 12189 | A | 5065 | 237 | 381 | LHQPTTQT/LAFTSNLRGR*RSAA/LPDAL DSSKVSEMHRLFKRRGVN |
| 4139 | 12190 | A | 5066 | 1 | 876 | |
| 4140 | 12191 | A | 5067 | 1 | 78 | |
| 4141 | 12192 | A | 5068 | 155 | 417 | |
| 4142 | 12193 | B | 5069 | 40 | 411 | MQVTGVRTD/GALNITHKLASSPHSKPF PIFQATFISDHIRCIAEQLAKGRIPGKA HEDAENSCPPWTSQSSPLKSWGLDSAP PPPLSTCLSASTTRGAGAAATPQCSAPCL HRWTRCQ* |
| 4143 | 12194 | A | 507 | 1 | 714 | |
| 4144 | 12195 | A | 5070 | 1 | 987 | |
| 4145 | 12196 | A | 5071 | 111 | 2187 | DERRVGAADMFGORSRWVGGGHGKTS RNIHSLDHLKYLYHVLTKNTTVTEQNRN LLVETRISITEILWGDQNDSSVDFPLEK NMVFYFLNLRQKSGRYVCVQLQTLNI LEFENISHETSLYYL/LSNNYVNSIIVHKFDF SDEEMAYYSISFLK/LSLKLNNHTVHFFY NEHTNDFALYTEAIKFP/NHPSMVRJAV RTITLNVYKVDNQAMLHYIRDKTAVPYF SNLVWFIQSHVIELDDCVQ/IDEHHRNRG KLSDLVABHLDHLHY/LNDILINCEFLND VLTDHLLNRLFLPLYYSLENQDKVFLII HHAPLVNSLAENVLNGDLEMYAKTEQD IQRSSVLP/LSSLWQGS/LSLNLQSQGLH KCSSHLGCAQAAADS/VTGEIPAIRSLEW LISAGSKARTFFFLKMLIGFWEKVDCEY QRRQVLS/TRLQEA/PSNRLTDVA/VHSS CMLGFGSTAPRGSWIGDPA/VHLP/LPGE LAEHLGSKGTTVT/KHQ/QAKPSIRCFIK PTETLERSLEMNKHKGRRVQKRPNYK NVGEEDEEEKPTEDAQEDA/EAKAGTE GSGKGKTS/GFSEIE/EMVIMERSKLS/ELA ASTSVQEQNT/DEEKSAAATCSESTQWS RPF/LDMVYHAI/DS/PPDDYHALFV/LCLL YAMSHNK/GKSPEKEGLSGTQSHPGKA GTFGKEGAERKRAQV |

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| 4146 | 12197 | A | 5072 | 2 | 2774 | RNLLVETIRSITEILWGDQNDSSVDFFL EKNMFVFFLNILRQKSGRYVCVQLLOTL NILFENISHETSLYYLLSNYYNSIIVHKF DFSDEEIMAYYSFLKTLKLNHNTVHF FYNEHTNDFALYTEAIKFFNHPESMVRIA VRTITLNVYKVSLDNQAMLHYIRDKTAV PYFSNLVWFGSHVIELDDCVQDDEHR NRGKLSDLVAREHLDHLHYLNDILINCEP LNDVLTDHLLNRLFLPLVYVSLN |
| 4147 | 12198 | A | 5073 | 2 | 1802 | |
| 4148 | 12199 | A | 5074 | 546 | 802 | GQAGRARQVRSVPSSALITLPLA*QKH G/ISRWWVIGDENYGECS/SREHAALPR HLGGRAITKSFARIHGELESVPSPSSHP |
| 4149 | 12200 | A | 5075 | 3 | 2380 | SLSVHKMAPYSLLVTRLQKALGVQRQYH VASVLQORAKVAMTHFEFNEYHYDILLE KNINIVRKRRLNRPLTSEKIVVGHLDOPA SQEIERGKSYLRLRPRVAMQDATAQOM AMLQFISSGLSKVAVPSTHCDHLEAQV GDEKDLRRAKDINQEVYNFLATAGDKY GVGFWSPGSGIHHILENYAYPGVLLIGT DSHTPNGGGLGGICIGVGADAVDVMA GIPWELKCPKVGIVKLTGSLSGWTSFKD VILKVAGILTVKGGTGAIVEYHGPQVDS MSTCGMATICNMGAEIGATTSPFFYNHR MKKYLSTGTREDIANLADEFKDLHVPDP GCHYDQLEIENLSELKPHINGPPTPLAH PVAEVGKVAEKEGWPLDIRVGLIGSCTN SSYEDMGRSAVAKQALAHGLCKCSQF TITPGSEQIRATIERDGYRQILRDLGGIVL ANACGPGICQWDRKDIKGEKNITVTSY NRNFTGRNDANPETHAFVTSPEIVTALAI AGTLKFNPEITNYLTGTDGKKFRLEAFDA DELPGGEFDPQDQTYOHPKDDSSQGHVD VSPTSQRLQLLEPFDKWDCKDLEDQLIL KVKGKCTDHDHSAAGPWLFKRAHLDNIS NNLLIGAINENKANSVGNVATQEGFP VPDTARYYKKHGIRWVIGDENYGECS SREHAALPRHLGGRAITKSFARPRD EPGRKQGLLPFGPFAUPADYNKIHFAVD KLTIQGLKDFTPG/RSP/LKCIHKPNQ/QA ETILLNHTFNETQIEWFRAGSALQK*RN LQQ |
| 4150 | 12201 | A | 5076 | 3 | 203 | |
| 4151 | 12202 | A | 5077 | 52 | 393 | EASAWPAPRGSMVMVAEDPACSVTLCP ESLSGYLPGSGGQFSPAAGTSPSLPPRS LPGLEKLRSPSGRESRLSSAPRAPISAK AQLQCCAEEDFEIVNNV*FSSVTCLSL |
| 4152 | 12203 | C | 5078 | 121 | 396 | MALPGRILPHRKLAGGTLEAPWFGIPSGA VRRHQPPPTLXXWLGVKVKPLRKRRIE AKFLCAEGPEHIRQGSAAVPGGGGRSRN CEQCLI** |
| 4153 | 12204 | A | 5079 | 3 | 755 | FVVDFDRPHETRVLQVSCGRAHSLVLT REGVFSMGNNSYGCGRKVVENEISFS HTVHRMHDQVQVACGQDHLFLT DKGKVSVCWVGADQGTGLGHYNITSSP TKLGGDLAGVNVQVATYGDCCCLAVSA DGDIFGWGNLEYLQLA/AVPTDSTQVN VPRCLHFSVGKVRQ/CLHAVARAVQC* TGEHGVFVWGYGLGKGVNLSKCPSL KMIPPTLFGDFQPRNPGFAFRCGIQA TLHH |
| 4154 | 12205 | B | 508 | 1 | 546 | MKQPNRKRKLNMDSKERLDQDGRIVK MSFFVFCVVSSESEHEETQDLMCESELF WYLLHMWSLQDQHQHLLHDHNSPAR GQHWMENESDELTEVGRFRWVITNSSEL KEHALTQCKEAKNLEKRLDKLLTRIISLE KNINELMELKSTARELREAYTINSIDQ VEKGYQRLKINLMK* |

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| 4155 | 12206 | A | 5082 | 7 | 279 | GQVCIATGVQWYHLSLQPLPPGKRF LCSASRRAPPCANF*FLVEMGFHHVG QAGLQLTLGDPPTSASQSAGITGVSHH ALPAWL |
| 4156 | 12207 | A | 5083 | 5164 | 5586 | FTAALNSWVWLKSSCFLLSSWDCMYDL PCPASFFFFL*SEALVAAQGVQWCDL GSLPPPPSGFERFSCGLPSSWDYRPP/P TPG*FFFFVFLVEMGFHYVGAGLELLT SSDLPTSASQSAGITGVSHHALPSLYK |
| 4157 | 12208 | A | 5084 | 2 | 5438 | |
| 4158 | 12209 | A | 5085 | 1 | 4294 | WAVFDGNYYYLPAWHITKPVVTLTSY WEDISHRLDAVNALLAMAERLQTNIEAL KSGIQGKIPANQLAELWLKLIDEVIEDTR YTLPLTEGKANVTVDLTQIRKLRSRLSQ IHEAAVRMRSEATDVKSTLAEIEDWLKD LMQLTEEPQNSMPDIIIWMIRGEKRLAY ARIPAHQVLYSTSGENASGKYCGKTQTI FLKYPQEKNNNGPKVPVELRVNIWGLSA VEKFKNSAEGTFTVFAEMYENQALMF GKWWG |
| 4159 | 12210 | A | 5086 | 444 | 797 | FHLSPGASKPMLEPLDWEPCCKLNDV KRAKSVPLTRHLH*VYLLMLSLPPPPTQ QAPVYDVLPVSKCSHCQFLWF*FAL* WPVMSVVFSCVCLHKLCLLRSVCSYP LPTF |
| 4160 | 12211 | A | 5087 | 489 | 611 | SPCPLCPPEWYCLGFLGLFWL*HLSL *SILNYFLKYV |
| 4161 | 12212 | A | 5088 | 1 | 336 | |
| 4162 | 12213 | A | 5089 | 1 | 1581 | |
| 4163 | 12214 | A | 509 | 1 | 732 | |
| 4164 | 12215 | A | 5090 | 235 | 583 | |
| 4165 | 12216 | A | 5091 | 1 | 430 | MGKDFMTKTPKAMATKAKIDKWDVVKL KSFCETAKETTIRVNRQPTWEKFFATYSS DKGLISRIHKELTQIYKKKTNNPKKWAK DMNRHFSKEDIYAANKHMEKCPSSLAJK EMQIKTTMRVHLMVPRMAIJKSGKNR WELNNENTWTQEGEHHTLGPVVGWVK GGGKALGDTPNVNDELMAFSTTRPTFFP RSDPTTTRPMAVPPHEEKDDHLETHRPL RPRITLPHAPDGRWLLTLTHSTPGKT GLRTYRCLSRTEKVQT AGARPSHPHSS AAFTTWAKGPTGRRFGHMRSEATQKE VTMSPCTALRGQKADSKAHGQQGTWA ARGMHTEGTCASRGFSSLPSTRIPK VFVAERKGLRGVLSLTPFSCIQKHWE QTVPMSPLEDVSE*TNLQNGRNLQ THLTKG*YPESTKNSHKFTRKQTPTSKS GQRI*TDTSQKKTFMQPTNTWKNAIHHI WPSKCKSKPQ*DTT*QCLEWQSLKSQE KTGGN |
| 4166 | 12217 | A | 5092 | 65 | 163 | LEASKFSLVPIGPSV*CSPPCHVFSLFNS HL |
| 4167 | 12218 | A | 5093 | 175 | 495 | PQFFGNVLGHLLYSFLGPFQCDENIRYLS *CSPSSCPCTNRQYVMFPLSPCVLMV QLPMSSENWCLVFCSCDSLRRMMVSS FIHVPRFCYCNLVVYFEVRCH |
| 4168 | 12219 | A | 5094 | 67 | 351 | LHTRKSVFNCVKLFHLCHISSVLINQLYDR PWCVMFPTLCPSVFVQFPMSSENWCL VFPCDTLRRMMVSSFIHVPPERHKSKH HDTRG*CSNM |
| 4169 | 12220 | A | 5095 | 2 | 431 | QVFGSIVRIHQGEWFPPLLYGILLPRVQNC LTN*LDLCSWSQHQTPHVLTNRWELNNE NTWTQEGEHHTLGPVVGWEGGGIALG DIPNVNDKLMGAHQHDFLVPKTIQIV LSISQVRVPFIDHRRKARYSADLTSLIAI PG |
| 4170 | 12221 | A | 5096 | 75 | 173 | |

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| 4171 | 12222 | A | 5097 | 1 | 2349 | MLEDRDGEDEDEDRLDNAVRGPQPK GPVGTVSEALARRLTKVNSRRMLSN KPQDFQVATAWRSASLFNLYIAHLLAJA VMFQWYTSNGQWLNRRPALNDEFTAJL GLYNFTVPILGMITLGGSTQLVAPGLAQS CPGLVLAILIGEGNEATPEPKDPTCWER LGNHPPSVLQIRVVRVIEGRLQSGNNIRPV VKVHVCGQTHRTRIKRGNNPFDEVLW LQPGDHTPASYSRAGLNDYHNCCKNKM QGVVLTHKWEIENNENTWTQDGEHHTL GPVVGLWPQCLTDEPGFGEETWASTQPF AGVTCKALYLLHFTPTAIGSHCLDHCFR DPLGKNYRKEKVGRLDLGICRRPGEOR LGKHILRNVLGDDAAELIGTATVALKD LTGDQSRSLPYKLISLLNEKGQDGTGIYNC ELENVAEFEGLTDFSDFTKLYRGKSDEN EDPSVVGFEFGKGLQMWVDVFPKSLGPP GPFPMITPRKAKKYLRVITWNTKDVILA EKSITGEEMSDIYVKGAWPGNEENKQKT DVHYRSLDGEGNFNWRFVFPFDYLPAE QLCIVAKKEHFWSIDQTEFRIPRKLIIQW VNDKFSLDYLGFFRNILRTHITFLQ KSPGGNC/RGLDMISGTFKAMNPLKAKT AFLFEQKFMN*WWPCYAEKDGARVMA OKVEMTLEILNEKEADERPAGKGRDEPN MNPKLDPNRPETSPFWFTN*CKTMKF IVWRGFWWVIIGALLFLLILLFVGRAPLT LLPNYFVQWKIVKPNVLTGKGFSRVIQ Q |
| 4172 | 12223 | A | 5098 | 1 | 296 | RRSAPSTSLRTTCVSSCCWPRRRAPSMTP GAGYPSGSSAGP/PTHSP*PPWTRPS/SAQ RYLRK*QPOQPPALLPLLPAP/PKAWLS GLGPVLDSPGQ |
| 4173 | 12224 | A | 5099 | 26 | 253 | RWLSPWPLSCPOQGWATARNPQPTRELPP HPQAGKFFLPVPVFPQTPSPSLPVMGGGL SRPGSFSPVSVASLRCCTH |
| 4174 | 12225 | A | 51 | 702 | 1107 | LQERYSDPGLLASFHGESSQDRDLTVQQ EK*NAGSASPQPPHPNTCPQRDGRGFT RLPCHRMWGTGIRWKMP/LQ*AAGP/PH AA*WPGSLMPPCL*PSASA/WTRQ**PG SLPTLTSPG*DPGAHILLWRKQSY |
| 4175 | 12226 | A | 510 | 2 | 1601 | |
| 4176 | 12227 | A | 5100 | 274 | 2462 | RRSAPSTSLRTTCVSSCCWPRRRAPSMTP GAGYPSGSSAAHHRCDGWATTHSP*PP WTRPSWRSAYLRK*QPOGPTQHCCLPLP SOPPAKGVAVRAGPSCAGLSRATIGTQ GPG/TSFGHTWGQORYHEATFWG*LLD CLVEKSEKPR*LIILLITMF*STSVSLTML SLD*ARGRRPEAIPTPGSPAATN*PGAL LPTVQIS*KCSSLQAPERASPPCSPR/PPA TASFRPSLSDPGSP/APSGKPSPHLKPN NIFILFPYQLSHL*VAQSMATPCPOPGW TARNPQPTRELPHFPQAGKPLLPVPVFPQ PTSPSLLPVMGGSLRPGSSLSQWLL*G AVIHAR*PVPSILPRGTETWTWPSAKGPM GWAAGLAASGGLHSSK*PILVFRGW EHIPVPLPHNRCDSPGR*QSSM/VVR DSGEL*GLGDPGLPGFNKJCCPF*AEIL KWNARLARNAVLTQAPSPCPWWTWP CLMPKDPY/EAYPYVYLREAECLQAV MGPEAPPWPCSPVG/SVTVP/TSVSRSP PPKKLTICE*PWAS/SPNLLVPQFPHLEK MGPLASSRAAHAFSPSP/PHPLGR/LM PLPQWALWEPTGSPALTPPEASEACVMS QLSSR*GPRVLCWWGWGMPFSLYLFHR KSPAGAEMQSGGLGLPSF*PVLL*GPEAGP GPVAAEPSPQEVKLVPSGRLPVRGLSPSF QSNRRGLQSPVRQTGPFPPKVPJCV |

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| 4177 | 12228 | A | 5101 | 1 | 545 | DFPQSS*NLNITGKCGISP/GTPLNAAHF VPGQY/VDVTTKTMCKGFGVMKRWG LKAQPA THGQSKSTGRPGA V ATGDIGR VWPGTKMPGWGNIYRQEYGLKVWRI NTKPPIN YVKWSGPGP*KWLR*RSKDFK LPAFKDLGKNLPPIYIFLEGGEGTAQ KIGMDEKRVSPPGAPSN |
| 4178 | 12229 | A | 5102 | 2 | 202 | LFGYLPK*VDNMSTKKPCTWIFTLALCIT ARTWKQPRCLVGVKWI/QLCCI*KMYY SDFKKSCQAMK |
| 4179 | 12230 | A | 5103 | 1 | 422 | FFFFL RWSFTLVA*A*VQWRDLNSLQPP PPFRKRFCSLSLPSW DYRRASPCSANFL DF/HFLVETRFHHVCQAGLELMSGDL P ASASQSA GIUGVSHCARPLASFLIHFNK CISGVRLCSRPRYWSAAQKSLDLAY |
| 4180 | 12231 | A | 5104 | 2 | 375 | DGSCFVAOTGVQVWHNLGSLQPLPRFK* FSCLSLPSWDLRQVPPHPANF*FLV*P GFHDVGGAGLELLTSGDPFTLATS SVGIT GVSHCARPGSIYQRLDKKLRSVAART NRCLWSLPI |
| 4181 | 12232 | A | 5105 | 1 | 293 | RRLFFSFLRQSLVLVIQAGVQWGDLSL RPLPAGFKRFSCLSPSG*DYRHGPPRLA NFWIFTREGM/FAMILARLVNS*PQGDPP ASASQSSGDYRA |
| 4182 | 12233 | A | 5106 | 3 | 305 | ETETCSVAQAGVQWBLSSLOPLPRKLK FSCLSLNSW DYRCLPPIHANF*FLVET GFPHVGQSGKLKLTSGDLTSGSQSAGIT GVSHCTWAGKSYIF |
| 4183 | 12234 | A | 5107 | 1 | 485 | ARRDAAEVFLVSDPSGRMVKFSLQRLN SHCFAREKEGDKPSATHASRTMPLLSLH SRGSSSE/SDRLNVTIELTSDNKTIL NVQSRLTD AKRINWRTVLSGGSLYIEIFG GALPEGSKDSFVLLFEAEQRLADHVP CFHKNREDRAALLRTFSL |
| 4184 | 12235 | A | 5108 | 1 | 506 | FGVSYYLHDYNMRTNPGEMSESTVPTH PADRGWPGQPD AQFRGGFTPPPLFKTL RTCRPMKQASGLLGTROGCLTISKPKK LKVRSKAAAGEKPSLPLTRTPRPPPPP QODRACGLRMKGRRRHPAPHYCRRYGS PISVLA VLVANEDMVQSLLLSLQEN WQAVLAPLQRAARLDVAAATQHCPS PNWRTVLSGGSLYIEIPGALPEGSKDS LPVLLFEAEQRLADHVPICFHKNREDR GR*PVSPA VGCVGVPAPPLHSQAGTVS LRGWVGRAGSGRQGF*RLPRAAILLR TFSFLGFEIVRGHPLVPKRPD ACFMAY TFERESSGEEEE |
| 4185 | 12236 | A | 5109 | 1 | 996 | MVKSSLORILNSHCFAREKEGDKPSATH ASRTMPLLSLHSGGSSSESVWMAARD APGEAAH/CRRIIFG/PSRPGPGSWGWR TPTARQRP GKT PAASREDASFRGRGCQ LRLWGS/HAGSRSSPDCVPRGGRSAP DREDDRLNVRNNG*RSNRQDGGFFNVQ SRLTEAQ TALNWRNNC*SGGSLFNKPA GGRRWPESGGQLLQFLLEFAE/EKQLG ADHVFTCSHKNRE/DRSCLAPKLSAFLG LKILRPGHPLVPKETPDACFALQSRRE SLPGEEEVGARLRGWAIPPPWGHPPVS RVGRNRRLAHLAWVCPHVTVQINAH S |
| 4186 | 12237 | A | 511 | 1374 | 2220 | QAENSHININKDVHSETPSEGHQRKRP KDHSSSPAREQNWMEFDELTEVGRF RWVITNSSELKKHVLTOCKEAKNLEKRL GELLTRITSEKNINDLMELKNTARELHE AYTSINSWINQAEERLSEIEDQLNEIKRE DKITEKMKNSTTVL VSTWGSQLEQNNLP HIISPLFHSTHDLNISFYGGCLLQACSSKL LQGLAEGGPLRLTRSAFFAACLCLTKH FLPTMILKSRKTTPTOPRRLLYLLQGV |

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| | | | | | | VDQTSRKGPTALNIRQKTFAAAPPHR |
| 4187 | 12238 | A | 5110 | 1 | 125 | FFFEMESHVIRLECSGVNSAYCNL/TLP GSSGSPASAPPPQVGGTGTTHHIAQLIFV FLVETGFHHVGGQDGLDLNLNLRPPQPP KVLG*QAVLLPQHRPPK |
| 4188 | 12239 | A | 5111 | 2 | 280 | FFFFGDRVPLHSAQAQGVKWCNLGSLQ PPAP/GLKPFSCSLSPSS*DYRSLPPCPTHF CIFSRDEVSPSWPGWSPTPDLMNHPRFP KVLGIQV |
| 4189 | 12240 | A | 5112 | 2 | 291 | FLEMESHVAQAQGVQWRDLGSLQPPPP GFKRFSCLSPSSWDYRRPQPRPA/NEFV FLVETGFITILARLVNSNS*PRDPPASASQ AGITGVITYRARP |
| 4190 | 12241 | A | 5113 | 3 | 690 | FFFFLLRQSL/DSVTQAEVQW/RRLGSLR P/LQLPLGK*CCCLSLSS*DYSYNPLPRL ANFF/VFCIF**RRGFTMLARLLSNS*PCD LPTASASQAGITGVSH/HAPGLASPSLNN KVQSSVGAQRHDENGSRA*VFFCFFF FKRFALVA*AGVQWRDLSSLQPLPLRFM *FSCSLSPSS*DHRCPVPHANFFVEI*RD GVSPCQPG*SRSDLAIRPPRPKVLGLQ A |
| 4191 | 12242 | A | 5114 | 3 | 282 | FFFFETESHILSPRLCNGTISAHNCNRL PGPRDCPASAS*VAGITGVCHHAWLIFVF LVETGFHHVQGAGLELL/NLVRPLQPPK VLGLQA |
| 4192 | 12243 | A | 5115 | 3 | 198 | LSLNWCILYIYICIVVV/CVVLFCCHSCL NMGTF*FLAGLLFRICLCLFIFY*LL***L LFIMI |
| 4193 | 12244 | A | 5116 | 1 | 854 | MNKLFSILLGEKVDTQPNVLHNDPHARH SDDNGQNHLEGGQMNFNADSSQFKDENT DIAEKLEEKVRILCWVMTGPQNLKKA KHVKATWAQRCKNVLFMSSEENKDFPA VGLKTKEGRDQLYWKTIKAFQYVYHEHY L*DADWFLKADDDTYVILDNLRLWLLSK YDPEEPIYFGRREKPYVKQGYMSGGAG YVLTREPLKRFVDALKTVKCTHSSIED LALGRCMEIMNVEAGDSRDTIGKGNFFH PFVPEPHHFNKGYLPRFTFWYWNYYNY PUPVEGGLL |
| 4194 | 12245 | A | 5117 | 13 | 290 | ECRRRGVQ*CNHS*QQL*PP/GLMQSSL LSSPGSSDYRQVLLHSAEF*VFNLVEMG SYVVVQAGLKFLASSDPPALTSQWARIT GMSHITRA |
| 4195 | 12246 | A | 5118 | 1 | 595 | MGHHHVQASLELLTSGDLPASASQGRG VRLYYNEGRSSQASVYALFLLSPLTVTS AMAGTRPPSARSHQTLQACRAQKTKTR MSSI*GTGAKHQASSPGKAPLSTPSPYFW KPSLQTSPCSGKSLWASLPSLAALFLC FWQDAT*RSSTTRSSLPSPWPSRTRALRL STS*PECAPSA*ASSKAGERSTGDRL |
| 4196 | 12247 | A | 5119 | 3 | 496 | FFFLRCSVNSTAKAGVQCHNLSSLHPLP PGFKQFPSCSLSPSS*DYGCAPPHPANFYIP SRISQAWWRVPVIPATQEA/RQSNFVFAQ VGVQWHNLSSPQAFPAQFK*FSCSLSPS WDYRHMPPCPDNFCIFSRGGVSPYWPS WSRILDIMIHPRPPNVLGLQA |

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| 4197 | 12248 | B | 512 | 1 | 765 | MLAGQOREFFVGVGSADPALGAAGWP QRPGQARDLQALAMPEPPIPSMGSCAAGA SPTSTAPCSKAPSPIDHPRAAECRRRRARD WQAAPPAAVVRDPLGEASRAPESVKDV CTYDIMFDGGAGRFAAATLTGISELPAFF EERKSWKPKRQAPGALV* |
| 4198 | 12249 | A | 5120 | 3 | 329 | ETVSHSVAQAQGVHWHHVQSQQPPSPGS KQFNSLSLPGGWYRHRPPHPANVIFLV ETGSHYVAKADLQLLASNDPPTSASQHA GIIRSHCTPRPRIY*WSNKL*YKIT |
| 4199 | 12250 | A | 5121 | 1 | 537 | ERQSCSVARAGVQVHDLGSPQ/LPPRL KRFSCLNLSWSWDYRRALPHPG*FLYF* *RQGFIMLVRL/VLNS*PCDPTASQSA GITGVSHRAPVRLR*QNYYYETGSGS AAQAGMQWIPAMAMQPQPPRLKQASNL SLSSWDHVGWQPHANITTVCKTERKQV FRMHLLNNTMYREQ |
| 4200 | 12251 | A | 5122 | 1 | 197 | EAGSHSVAHAGEQWCDYGSLOHQPPV LKQFSLSLSPSS*DYRCVPPCANFLILM ISVSIRGSV |
| 4201 | 12252 | A | 5123 | 809 | 1472 | KTLLSCYLKSLWPVVDYLRSSLLRRRA SSFSGWRFAQRTHTRRLSRSSKAVQ TAFPRRSPSSRHRCGSSSRATTTCRMSFL SSLTCAQQLAGWVTLKRISGLRKRSM LMALKKWPCLMWKKRRSLPRYPQOPORT RGKKRSGKIMIRRLNGQMGPTVTPAPA MKEVQI/TKLKKSKRRSCSHCSSKVCDS KS/VQEQGAP*VGGQQPPPRQ*SYAWC |
| 4202 | 12253 | A | 5124 | 1 | 504 | DSEPCSVAAQAGEQ*RDLSGLOSLGLK QFSCCLPSSRDYRPPPCLANFCYF*YR WGFTISARPV*NSWPCDPTASASQAGT TGVSHQARLLLFKAFKVWSGDSI*CVN EFNISKISSFPSHFTSTPQSCPMHSHQIKY K*F*DYP*CSKQAGGISIDTY |
| 4203 | 12254 | A | 5125 | 2 | 351 | KQGHIMTYVLRPPFFSRWSL/DSVSQAG VQWRVFGSLQAPPPGFLPFCCTG/RQPPS PANFFLYFLVETGFLF**RQGFVLDLDMV SIS*PRDPPALASQAGITGVSPRTREQH S |
| 4204 | 12255 | A | 5126 | 1 | 1047 | MVSISWPRDLPASASQAGITGLIGALVL SVGIYAEVER/HEI*NP*KCLPGSSHHPP PGRRHVHGLLHWCAGVP*QPELLASL RLSRGYGLVLSWLEPRYEKMISGMYLG EIVRNILIDFTKKGFLFRGQISETLKTRGIF ETKFLSQIESDRLALLQVRAILQQLGNS TCDDSLVKTVCVGVSSRAAQLCGAGM AAVVDKIRENRGLDRLNVTVGVDGTL KLHPHFSRIMHQTVELSPKCNVSLLE DGSKGGAALITAVGVRRLTEASS |
| 4205 | 12256 | A | 5127 | 116 | 498 | YNFALKSELKFKNQAIVSLNKFFFFFLR WSLRPVAQAGVQWRDLGSLQ/PPPGLT PSSCLSPSSWNRRRPPCPAKSFWIFM* RRGFTVLARMVISI*PRDLPASASQAGI TGVSHRTREQHGS |
| 4206 | 12257 | A | 5128 | 3 | 490 | GIYHILRTGOEGRGSIKQORLLQRPLPYF FLFIFFSFLYMEIKH*LSFYILLFAFNIVS* PFSYFFFFR/DF*SVLLC GPGWSTVA*S*L TAASTSQDQGDSPITGPKVTDVRCGHH T*ANFYIFCGGWGGLTILLRRIPNSWAQG IFFPPWPKVILGLQA |
| 4207 | 12258 | A | 5129 | 423 | 495 | |
| 4208 | 12259 | A | 513 | 594 | 1300 | LGASEPWQPSQETPKHSWPSPH/PANQS KEVPENPNYALKCTLVGHTAVSSVKFS PN/CENGLASSADRLIHWGAYDGKYEK TLYGHNLISDVAVSSDSSRLVSASDDK TLKLWDVRSCKCLKTLKGSHNVVFCN FNPPSNLISGSFDETUVKIWEVKTKOKLK TLSAHSDPVSVAHFNCSSGLIVSGSYDGL COWDAASAGVCTKTLVDNPNVSVKVC |

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| | | | | | | CRIWDAASGQCKLTIVDDNPPVSFVKF SPNGKYILTAT |
| 4209 | 12260 | C | 5130 | 628 | 849 | MCGSVYSTIWSLIASRRRETIRVIVLIQS PNINTRHISKRLNKGVNQFHKEDWNLL KRVCSHSGAEGIFS* |
| 4210 | 12261 | A | 5131 | 350 | 412 | NFELKLSPYQKKSIVWGAAQVMPVAVG KPSSEWPPGSHMDNSQIRGNPVCQIK*FS CPSLQCSWDYRCMTPLCANIFFKLEGG FCHVAQTSKLLGSSPPILASRSTGTG MNHHAIRQLLN*SIRE*HSTHRLTHSRE KSCCNLYGKTLSSNFPPTKKVYSTGELP R |
| 4211 | 12262 | A | 5132 | 3 | 189 | HERKAQPAGEGRTHMTKSDSLPSFRVST LPLESHHPDPNMTGGASHRDALSGTAT VRDTRGIDPAPVHASPTRNRINEGRHVF KRFPDTLTDRSISIYTDHHSQIRTLRALS QL*TIPTQTPWAGPATGTGLSRGLPPYG TPEG |
| 4212 | 12263 | A | 5133 | 32 | 800 | FKTIKVRFLCIRVYSLCKKLLTYCDHFH SLDFEECAHKLLKMEFPESQTKELCNMI LDCCAQRTYKFFGLLAGRFCKLKKE YMESFEGIFKEQYDTHRLETKLRNVA KMFHLLYTDLSLPWSVLECLISEETTTS SSRUFVKIFFQELCEYMGFL*/SLIARLKD GNLAPFF*RIFFPRDDPRITRVAISFFPSIA SGCLTYCPVSLSSIPLRPLVALLPPIF HHDLLLEFLRFPFFYNDTLVLPV |
| 4213 | 12264 | A | 5134 | 2 | 706 | RCNSAQQOMTSSQKALMLEKLSQEEP VEGFRITLVDESDLYNWEVAIFGPPNTLY EGGYFKAHKIFIDYPPSPY/TFRFLTKM WHPNIYENGDVCSILHPPVDDPOSQEL PSERWNPQQCEGLLLRC*SHWLNEPQ HLSQPMSDASVMFR/KWR/DSKGKDKE YGLKFIRETKFSAT/KARRQEKGG*RF TTLGNTCIKTEVP/RNDEQVQSLLYDEL GMMTDIDDER*GRRKAD/CYDDDDSG E*GSPQWAGIPASKLRCPNDEQVQSL LYDELGMMTDIDDER |
| 4214 | 12265 | A | 5135 | 7 | 219 | EGV*VSRDW*QWS/DIGSVRHSMTGSGD SLASAF*VSGGTGESHHKQLIAVNMVEM GSHRAGQAGNELSTL |
| 4215 | 12266 | A | 5136 | 2 | 309 | DGVSLLSPLRQWNLGLLQPPPP*FKGF SCLSLPGSWDYRHV/PPCLANFVLVETG FRHVQOQLELLTSGDPPASASQAGIT GVSHRTWQKMYFLSQKYF |
| 4216 | 12267 | A | 5137 | 1 | 309 | SCLSLSSWDHRRVP/APHANFVFLVETG FHHVSQV/GLELLTSSNPPASASHAGIT GVNHRAWLPGLNLR*KMIRRLRLLLK NKFHSTLRKSETSNSCE |
| 4217 | 12268 | A | 5138 | 2 | 625 | TYGEMAKIVDVPTKQLRAPDPDSMLCH FCHNVSPFCITRNGCVDMHFVKIKTHQI EDERERREKKLYFGYSLLAGHPILNQITG RMQRATEGRKEELFALYSADHVTSLPVL SALGLSEARFPRFAARLIFELWQDREKPS *TFVRILYNGVDVTFHTSCQDHHKRSS KPMFPLENLVRFVVRKRDMPH.ALGGSCTN YYDACHREGF |
| 4218 | 12269 | A | 5139 | 167 | 688 | |
| 4219 | 12270 | A | 514 | 188 | 478 | QRGVLLKATANVLVPEDLGREMRIFFSVK TWKTFCTIFTGTNIHLFLYFFETASLS EAQAGAQLGSLQPPPPGGSDSPASAPI AGITGACHH |

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| 4220 | 12271 | A | 5140 | 3 | 1230 | QRDSYAREFTTIVVSCCSAEQLT/GEGAT ARNIFLSGFQVVLLEDTVLFPEGGGQPPD RGITINDISVLRVTRRGEQADHFTQTP.LDP GSQV.LVVRD.WERRRFDHMQHSGQHLIT AVADILFKLETTSEVWGFRSAIELDTP SMTAEQVAIEQSVNEKIRDLRPLVNVRE LSLDDPEVEQVSGRGLPDDHAGPIRVVN IEGVDSNMCCGTHVSNLSLDQVV*ILGT EKGKKNRTNLIPLSGNRVLKWMERSHG TEKALTGLLKGAEHDHVEAVKKLQNST KILQKNLKSQAQ/RT*AVHIAHSLKEQSR LGRCGHITQEGG*FRVHEVHCQ*RLGQR RPSLFLTGR*ERWWTL.YWQGHRL.W RPWGPGLRSWEGKGAGKGRFQGKA TKLSRRMEAQALSPGLHQHAEC |
| 4221 | 12272 | A | 5141 | 3 | 306 | SRQWTLFADGQHS GPAAPCPGGEV*RTG ALNPKTFQG/LPSAPGPCVPHGASHP*T PQKLQPGNKSQMKPVKPGFFPSGAGGA WASL*FSSLPFPDLQYLL |
| 4222 | 12273 | A | 5142 | 1 | 306 | FFFFL*RGSCSVAQAGVQWYDPSGOKP PPPRFRFSCNL.PSS*DYRRPPLPAIFV FLVETGFHHIGQDSLKLLASSDLPIASQS AGITGMSHCTWPV |
| 4223 | 12274 | A | 5143 | 81 | 657 | TAEGGEEETKSGELGRSQRITLSQVGATR GTSEITLIVQMRDAGSALCSGIGGGEK WSVLGVILKDDRIVLA.YCMGHEIKRGI EDDSKVFFFFLEMKSCSVVQAGVQWH DLSSLQPALPRYK*FSCLSLPGSWDYRH VLLRLVNF*FLVEIGFHHVQAGLKLIT SSDLPHSASRSAGITGVSHRAPFG |
| 4224 | 12275 | A | 5144 | 3 | 494 | ETEDLALSPQAGVHVAR/LSLQQPPPPG VFKQLCLSLSSWDYRG/PCHPHAKFL AF*VETGVSPSWAR/LFLNS*PRDPPASAS QSAGEPPRWASVCNSVKMLSSAFNWCV CRLHKEKWMRRQKTHTVMIPHSNRCSS RHFSRIPSSIETYNL.RHTLLAGRF |
| 4225 | 12276 | A | 5145 | 3 | 123 | ESGSHSLPKL*CSGAITAHCNLLKLSR DPPTSASGVAGT |
| 4226 | 12277 | A | 5146 | 3 | 292 | RQRLNSVTHSGVQWRNPGSLQLPPPGF KHFSCLSLSSWDYRHTQCPAIFVFLV ETGFRHARLVNS*PHNLPVSAQSAWI TGLSHHARPCVSF |
| 4227 | 12278 | A | 5147 | 2 | 303 | FLGWSFTLVVQAGVQWRDLGSPHLPFP GFKQFFCLSLPSS*DYRHAPPHLANPFL GEMDFLHAWQAQGLELLTSGDPTLASQ SAGITGVRHCSRVPSE |
| 4228 | 12279 | A | 5148 | 2 | 613 | PRVRTYRFGSVGHDTQLCLWDLTEDILF PHQPLSRARTHVMNATSPAGSNGNS VTTPGNSVPPPLPRSNLPHSAVSNAGSK SSVMDGAIASGVSKFATLSLHDKREKAP RERSQSRNHSMGHINF*QEAESKLESS/SP KPKPDPAKLTGTPCPRMEDVPLEPLIC KKIAHERLTVLIFLEDICVTAQEGFICT WGRPG |
| 4229 | 12280 | A | 5149 | 2 | 393 | IGFQFQLETFQVSLQDLEKLSGLVFFPHL DRTSDIRNICSVDTCLLDQEFETLYLST RKIEGARSVLR.LDKIMDHLKNV*NEPYD YPMRRYKQLQELTAIDL.TSHISQPSLL SYTTLISGATPFFT |
| 4230 | 12281 | A | 515 | 355 | 612 | SFISISGSFASIALVCQLLAVKGSVFVEVG GISYCP.LNVFLLDLQ.VAPEEDERKKRRR ERNKIAAAKCRNKKKEKTECLQKVSFA |
| 4231 | 12282 | A | 5150 | 644 | 962 | NASSLAWTVLLKLLVGFAGQCMGNFF FCWGGAMESPSVAQAGVQRNLSGLQ PPPPGFKRISCLSPSSWDYRHVPPHPAN FICPSRDGVSRCWPGWS*TPDLR |

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| 4232 | 12283 | A | 5151 | 3 | 321 | RRCLCAGYFKNVARRSCWRTFCTMDGR GSPVHHHPSSALHEQETKLEWIFHEVLV TTKVYARIVCPRIYEWVRDLLPKLHEFN AHGFEQCGPT*SERRCKKEMDK |
| 4233 | 12284 | A | 5152 | 237 | 602 | LLITGRQYSLTFRFYHLRNKLNSGLG KPPLKLHFYTEAFFARNPDQMEFHSVAQ AGVQWHDLG*LQPLPAFKQFCLRLS SWDYKGTTPCLAGFCIFSRDEVSPrWRG WS*TPDLK |
| 4234 | 12285 | C | 5153 | 166 | 417 | FLKRENLLKNVCRNKLDLPNRASPTGS QEWROHGVQSEVQFVHSLKPGPPADS CRITAA/GDPGGTETADPGHTGLELRFPEP PKPTLFLALSEAPVPERGENTGPRSLPS TPMPSWGFLSSPPRPAISPTSQAN*PP PPRSSHPTTVPTTRPQWQPGCCAQP RCLH*RGGN*Y*GMQLHQKSVSWPH SQWPQKREGNGSSHEHPSCPPSGPHGPS PEGRMPTQAGALHSWVPGLSLHSGSGP HPPFRWTATVQAARPRVPLNL |
| 4235 | 12286 | A | 5154 | 282 | 1112 | FLKRENLLKNVCRNKLDLPNRASPTGS QEWROHGVQSEVQFVHSLKPGPPADS CRITAA/GDPGGTETADPGHTGLELRFPEP PKPTLFLALSEAPVPERGENTGPRSLPS TPMPSWGFLSSPPRPAISPTSQAN*PP PPRSSHPTTVPTTRPQWQPGCCAQP RCLH*RGGN*Y*GMQLHQKSVSWPH SQWPQKREGNGSSHEHPSCPPSGPHGPS PEGRMPTQAGALHSWVPGLSLHSGSGP HPPFRWTATVQAARPRVPLNL |
| 4236 | 12287 | A | 5155 | 69 | 734 | SRLGRDHVGPGLGGVGVRRENDIGEY EGGRNEAGERHGRARLPNGDITYES YEFGRKHGGQIYKFKNGARYIGEYVRN KKHGGQGTIFYPDGSRYEGEWANDLRHG HGVYYINNDITYGEWFAHQRHGGQGTY LYAETGSKYVGTWVNGQEQETAELIHL NHRYGKFLNKNPVGP/AKVCI*CWV* TW*ISFNRYGKRRRGGRISNCCSKME SYPNH |
| 4237 | 12288 | A | 5156 | 4 | 674 | GVQRGHFQEAAGSGRCLSSLVNPHSP SAGMDPSPVPNPEEAAGPLAQVPSAAL AQVAPGPVPISSLEGGTNPSP*ERGNSS HKQASGPERGARPPALLGQOEIGSSK/Y PPPFGSTLGKLLASPRCGPPQVLGWG LRDPTIRLEEGWGL/GNTPREPSIKCSP* MGRMGAQPLPKAEGAPPPTLPPTHSPR RILGPLGASPERPPRVVPPGEGE |
| 4238 | 12289 | A | 5157 | 3 | 342 | NFFFLRQSP/NSVTQAGVQWRDLGSLQ LPSTGFTPSCLSLSSWDYRHPHPANF LYF**RRGFTLLARMVLIS*PHDPPTSASQ SAGITGVSHGAWPKSIFFLNAEVMYY |
| 4239 | 12290 | A | 5158 | 1 | 251 | VVCVCGFCFVLETESRSVTQAGLQRHHL SLQPPPGFKGFSCLSLPSSWDYRCP LANF*FLVEMGFHHVGGAGLKLYASSD PPASVSQSAEMTGVSHHLP*SRSVTQ AGLQRHHLCSLQPPPGFKGFSCLSLPSS WDYRCPPLANFCISRDGVSPRWSGW SOTRGLK |
| 4240 | 12291 | C | 5159 | 24 | 362 | MGHTVFRXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX* |
| 4241 | 12292 | A | 516 | 3 | 853 | SQARTAQLSSLAARAHPSARAPAVSPR CSPAQGTNSPPDPVPTLAAPSGAWSKM MLQHPGQVSAASEVASAIVCLSPSPSLV FEDFANLTPFKDELRFIAQNKHLCHRM SSALESVTVSDRPLGVSTIAEVAPEDE RKURRRERNKIAAAKCRNKKKEKTEC LQLQY*QSHRPPLWHHGGFSEEEGLHFP KPSAALPSPIFLSLQDEPRCVQSEKLES VNAELKAQIEELKNEQHLYMLNLHHP TCIVRAQNGRTPEDERNLFQOIKEGTQL S |
| 4242 | 12293 | A | 5160 | 1 | 287 | FFFF*DIRVSAQSPRLCSGAILAHCLCL PGSSDSCASTSPVAGITGMCHITQLIFV FLVETGVHHVGRAGLELRLQVHPPQP PKVLGLQA |

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| 4243 | 12294 | A | 5161 | 1 | 1672 | QTGLQATTIKHSGFPVRMDNAVPIVPQAP AAQPLQIQSGVLTOGSCITPLMVATLHPQ VATTIPQYAVPFTLSAAGRPAVLEODC RCTAGVAWKGKQLLLPSNFGQQLAWG *ALHNSVQPTAMIPAMSGGQQLADWR NAHSHGNQYSTIMQOPSLTNHVTLATA QPLNVGVAHVVRQQSSSLPSKRNIQS APVSSKSSLDVLPQSVYSLVGSPLKRTTS SYNSLIVPVQDQHQPPIIDTPSPSVITIT RSDTDEEDNKYKPSSSGLKPRSNVYSYV TVNDSDDSSLSPLYSTDTLSALRGNSG SVLEGPGRV VADGTGTRTIVPPLKTLQGL DCTVATQASGLLSNKTCPVASVSGQSSG CCITPTGYRAQRGGTSAQPLNLSQNNQ SSAAPTQERSSNPAPRRQQAFAVPLSQQA PYTFQHGSPLHSTGHPLAPAPHLPSQ AHLTYAAPTSAALGSSSSIAHLFSPQG SSRHAAAYTTHPSTLVHQPVPVSGPSSL TSASVAPAQYQQVATQSVGSGFRGST IYTGYPPLSTKISQCYL |
| 4244 | 12295 | A | 5162 | 1 | 111 | ELRYKRWPGWKADTPQAQTVKVVGV GKSRESMIQLF |
| 4245 | 12296 | A | 5163 | 2 | 1034 | DRAHLVDFDHFQAVDGLQEVQQAQEGK NIGTTKKGIGPTYSSKAARTGLRICDLLS DFDEFSSRFKNLAHQHQSMPPTLEIDEG QLKRLKGFAERIRPMVRDGVVFMYEAL HGPPKKILVEGANAALLDIDFGTYPFVTS SNCTVGGVCTGLGIPPONIGDVGYYVKA YTTRVIGAFPTQEQNEIGLLQTRGHEW GVTTGRKRCGWLGSIMILRYAHMVNG FTALALTKLDLIDLVEVKVGVSYKLN GKRIPIYPFG*PGRCFKKGRKLKYETLPG WKADITGRPRGWEDLPPQAQTYIRFVE NHVGSRSQYHQSFLLVSVKVVGVGG VQESPMLQLF |
| 4246 | 12297 | A | 5164 | 3 | 148 | LSSRDHRHVPHFANFCRD/RGLAMLP RLALNSWA*AIHPWPVKVL |
| 4247 | 12298 | A | 5165 | 3 | 325 | YVFSODLAHQILNVSLGIRRLHLADVSV GICLAKLRIAPVPPHNESVFNWRCPYS SCSYHHLITSHQFQPSLEIKYWNHLQHN KHNAACANAA*EKAGMYRHRRLH |
| 4248 | 12299 | A | 5166 | 373 | 950 | SRGVFFFLRQSFTLVA*AGVQWCDLGLSL QPLPPRFKQFSCPASLVSWDYRHAPHP ANFFIFLVEDKGFSMLVRLGLELPTSODL PASASQSPGITGVSHHARP*MILFIMFMSF GRRDGVSVTQAGVQWHDLSGLQASPSG FMPFSCLSLPSWDYRHHV*PCQANFLYF* *ANLSRVSPCWSGWSRTPNLK |
| 4249 | 12300 | A | 5167 | 2 | 334 | VRHRTLVPAQAGVQ*CSLQ*QSPFPWF KQFSCLSLPSWDYRHLPPHNPANFVFV EKTGFHHVGGAGLELLTSVDPASASQS AGLTGLSHHAQLSFNLAKKSSFTKTRS |
| 4250 | 12301 | A | 5168 | 35 | 437 | |
| 4251 | 12302 | A | 5169 | 1 | 1845 | |
| 4252 | 12303 | A | 5170 | 1 | 212 | |
| 4253 | 12304 | A | 5171 | 371 | 915 | |
| 4254 | 12305 | A | 5172 | 1 | 2460 | |
| 4255 | 12306 | A | 5173 | 1 | 933 | LESIMIGDPGNRGIGHLLCKDELLKASLS LSHARSVLTITGPFTHNHEPPEIDGPP GAVALVAFLLQALGRRSP*SLTREPVLH QKIVEDALSKVP*RRRSRY*LTUVQWQ KLLRHSCAKIGDPQTLRFDHLVAIERAG RAADGNYYNARKMEHQALRLTPFDDL FLSAKPKGISSIGVGDGNGNELMGKVK EA/DEEAHTARGCHRLATVKAFAVIAIG VSNWGGYALACALYILVSCAVHSQYLR KAVGPSRAPGRFRPGLRPSRSLRKKKC |

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| | | | | | | WASWCSTKSGVASRASWAWRMWGCPS TTPTR |
| 4256 | 12307 | A | 5177 | 1 | 439 | |
| 4257 | 12308 | A | 5178 | 1 | 552 | GNEFSILKSPGVS VFRNGNWPIGERIPD VAALSMGFSVKEDLSWPGLA VGNLFHR PRGYPSWVMVKGSGGTALALTPQAVVIS YPLENRVYVMVGKANSVPAEDLSVTLRQ LRNRLFQENS VLSLPLNSLRNNEVDLL FLSELQVLHDISSLLSRHKHLAKDHSPDL YSLELAGLDEIGKRY |
| 4258 | 12309 | A | 5179 | 3 | 1111 | ILKSPGVS VFRNGNWPIPREDPDPVA AULSHGLPL*KKDLSPWGLAVGNLFHRP RATVVMVNVNGVNKLDLPPGSGISYPL ENAVPFSLDVANSVHISLFTSEETPVVLQ LAPSEERVYVMV/KGRANSVFEDLSVTLR HSRNRLVFKKTLFLSFTTPQILLSRNNEV DLLFLSELQVLHDISSLPSPKHLARDH SPDLYFTGSWAGLDEIGKALLGEDSEQ FRDASKILVDALQKFADHDVPMVMVGN PVVELVHCPSHLNTSPPLGKTRDPLRPFK QAQEPQQVPYNLA/YKYNFEYSVVFNM VLWIMIALALAVIITSYNWNMDP/GYD SIYRMTNQKISEWIECYLWPRIRKRFGF NWLFC |
| 4259 | 12310 | C | 518 | 512 | 739 | MAEHHWAFPIPSXASXGFAXLQPTKATL KKXCEGFKXPKKKKKKKKTEGGAGXTX DCXPXGGAGXNKXPGXXXG* |
| 4260 | 12311 | A | 5180 | 18 | 594 | NVAGTAICSFAPGRRQTPCHTREPQDGR PRARLTAWTRARGTCRVVAHTHTGRQNH PMPLWGFSSRHHRAFSEHLSLGCAPPSAT WT*TRSPAAAAAGP/PVPRKPNPSPPSRS PAGLRPPGRAGPLTSPRCPPASQASDT VGPVRHKQRGPTSDVSGAWDGATAAS GPVVRLYPSLGGGRQJTRSADKT |
| 4261 | 12312 | A | 5181 | 68 | 446 | RLTSELAQTLAVHPSKSARPRP*AGEKP GKKPPLQVNGAWD**PRVGADPGHSPD SLDPSTGDVQGSYSYWEGRITIMPLW GFFDRAGLLGSPGSSGPGRRPLAGQPY KLLEOARFLGPGH |
| 4262 | 12313 | A | 5182 | 2 | 512 | APPSATWT*TRSPAAAAAGP/PVPRKPNP SPPSRSPAGLRPPGRAGPLTSPRCPPAS PGIGHCCOQRQTQAAWPRRRTYQGRGMG PRPRPRPVVVGGERSHSPSPPLRSP GPEWGLTSSSCPARG/PGCLCPQNQLPN PGP/SGPASPNIPLSPRLHPTDTSQGFRA |

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| 4263 | 12314 | A | 5183 | 14 | 720 | RNFPDRTPRTRGRTRGRTRVRTGPG PVASAGCSRGDGRGFEAGPTALDSGADS QVRDITL PVHEPGSCLRYRTRPRSSRAH PTPLJRPTS GPRCFGSDGTHSVRCPVNAG RPGHLLGLGG/AKSSGFAGQKGRLLLAAG TCGVH VQGLRAAR PQEVLIFQGGPLQP AAPPEQPATGAWLQPLRCSEKAL*LP* GAP/SQSPRPMQPTTVPASG*NAGGPGA SGGTRVPG*KLPDTGGP/SAQHPLSPTGL PHDAR/PSSCPTGRSCVHCQPLNAVHL* E*PANSELSRPLSEDTGP**AAPTRPGSAG PISDPHSVPPSPSSSGTALPGHMSS/GG KWYQHQSACPV LGL/PPDPGAEKAGSQ PSPGHLVQAFGHPGPPGHPITPAVTPSPFN SRAALPSFSR*PCQSPKFGGCDPRPPR KPKPWKFQGS L*GLPLQKNRPPSPRTG ATPGEPPGAL/PLSGNPPKSHRDGSLPS MSMSHPARPSVLGSKLSGFLPSSWPGPC TF**WMKCGRTSRIRGHS CAWLKAA |
| 4264 | 12315 | A | 5184 | 2 | 1558 | RRSRDSGYRAPSPASHSRPQAAARAPAPR PARREVCCPRPGVPRRARTTRKTPTWAA VATGTRGAS AEGGPTGLAHG/SGLAAAA GLMGCCEPASGWPGRQSGGARTAAAGS SGSSSSGSPAPTSSSVLGSGLVAPVSPY KPGQTVFPLPPAGMTYPGSLAGAYAGYP PQFLPHGVALDPTKPGSLVGAQLAAAA AGSLGCKSPAGSSPLAGASPPSVMTASL CRDPYCLSYHCASHLAGAAAAASCAH DPAAAAAALKSGYPLVYPTPLHGVHSS LTAAAAAGATPPSLAGHPLYPYGFMLPN DPLPTSATGCRPTGRATSASPRKSC*AT /SRTHATFP GTDKLLSGYPSSSSLASAAA AAMACHMHIPTSGATGQPWDAGAAQPP PRGWD SAAATTPTPRA/ALPTPGAPVPVP AATGPYYPYALYGQRLTTASAAGVSV RGREGERGIGRKRGRGGVQGEAASRT RLLTARGEGLGPRKERNVLPYISYPTAA TETRWDTP LPTFTSHTQTL |
| 4265 | 12316 | A | 5185 | 6 | 56 | VVAWRGSDSFSGLTSKLVQRQVFHHQL LKTVP HQAHPY*LPRAALQIHRCLPR/ DTSQVAASLLASKSSQTSGLVSKSTSL ASVSQ LASKSSQTSQ LPSKSTSQSSSES SVKFSCKLTNEDVKHEATFF/LRLYKTV AWKLVAVGQFSPNVNNGELLNAIEAL KATLDVFFVPLKELADLPQNKSSQESIVC ELRCKSVYLTGCGCKSKENAKAVASRE ALKLFLK KKV VVKICKRKYRGSEIDL LLDEESRPVNLPPALKHPQELL*CVQONIT AYNIWYLKRKTD FCIV*N |
| 4266 | 12317 | B | 5186 | 133 | 345 | RLSERRNWT PQAML YLKGAGRRYLLR PEPANGPLRPAHCRIDHAPISTYIILRRPE PSYRSSSYFPDD* |

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| 4267 | 12318 | A | 5187 | 2 | 2168 | KESRRTVRRMLRGRSLSVTSLOGGLPQWE VEELPVEELLLEFEVAWEVTNKGVGITYV IQTKAKTTADEWGENYFLIGPYFEHNMK TQVEQCEPNDARRAVDAMNKHGCGQ VHFGRWLIEGSPYVFLFDIGYSAWNLDR WKGDLWEACSVGPIYHDEANDMLIFG SLTAWFLKEVTDHADGKYVVAQFHEW QAGIGLILSRARKLPATITFTTHATLLGRY LCAANIDFYNHLDKFNDKKEAGERQIYH RYCMERASVHCAHVFTTYSIEITAIEAEH MLKRKPDVVTNGLNWKKSVAHFQNL LHAMYKARIQDFVRGHFYGHLDFDLEK TLFLPIAGRYEFFKTKGADIFLDSLRLNF LLRMHKS DITVVVFFIMPAKTNFNFVET LKGQAVRKQLWDVAHSVKEFGKKLY DALLRGEIPDLNDILDRDDLTMKRAIFS TORQSLAPVVTNHMIDDSTDPIILSTRIRIG LFNNRTDRVKVILHPEFLSSTPLPMDY EEFVRGCHLGVFTSYEPWGYTPAECTV MGIPSVTTNLSGFGCFMQEHVADPTAYG IYIVDRRFRSPDDSCNQLTKFLYGFCNMMS RRQRFIQNRNTERLSLDLWRYLGRY YQHARHLTLRQSFSKINFHVTG*HAPPT DRKDFKYPRPSCSYPPFPQSSGPSSP QSSDVEDEVEDERYDEEEAEERDLNIK SPFSLSHVPHGKKKLHGEYKN |
| 4268 | 12319 | A | 5188 | 1 | 1347 | |
| 4269 | 12320 | A | 5189 | 1 | 272 | QTEGFKYRRPSSVPFSPSGQSSPQSSD VEDEVEDERYDEEEAAGFG/RYV*ESPSI LYAVPYSDSCQVTPSLHCSHFILFPKT DKSS |
| 4270 | 12321 | A | 519 | 1 | 760 | |
| 4271 | 12322 | A | 5191 | 225 | 430 | |
| 4272 | 12323 | A | 5192 | 16 | 1420 | PSVRRNRQFL*SKDFFDYWHN*RKQEGC YT/VLEKKVLNRRKQVVFQSSGKLTGS TSSLNLKSVQSSGNRRSQSSSLDMGMN SASDLVDADRTKFDKIFQVLESEPLECL AEQDFISKFFKHSNIKVCLEWAGSRGP GMGGTITAT*LLGTPLPVSEKDMIRQM MIKIFRCIEPELNNLIALGDKIDSFNLYM LVKMSHHV*LOQNVDPASFLTTLGNV LVTVKRNFDKCISNQIROMEEVKISKKS KVGILPFVAEFEFAGLAESIFKNAERRG DLDKAYTKLIRGVFNVEKVANESQKT PRDVVMENPHIIFATLSRLKISCLEAE KKEAKQKYTDHLSQVYVYSLGQPLEKLN HFFEGVEARVAQGIREEVSYQAFANK QELRKVIEYPGKEVKKGLDNLKYKVD KILCEEENLLQVWWHSMQDEFIRQYKH FEGLIARCVPGSGVMTMEFT |
| 4273 | 12324 | A | 5193 | 2 | 391 | FFFLRWLSA/SV/TQAGVQWRGLGSWQ RPPPGKFSCLSLSSWDYRPPPIAQLI FVFLVETSFTMLAGMVSIS*PRDPPASAS QSAGITGVSHRARI.TLLIFKRCISIRDESFE VFLVYLFKTNILLKA |
| 4274 | 12325 | A | 5194 | 2 | 302 | KTLOGSCPRLEVQVCNLSLQPL/PFPGS K*FSCSLSPGSWDYRSVPPRSANP*FLV ETAFHVGQAGLELSTSGDPPVPSASQSA GITGVSHSARQ*RAF |
| 4275 | 12326 | A | 5195 | 2 | 388 | RATPRHIIVRFTKVEMKEKMLRAAREKG RYTLKGKPIRLTADLSAETLQSRREWGP /IFNLKEKNFQPRISYPAKVFSISER*IKYF TDKQMLRDLFTSRPALKELLKEALNMER NNRYQPLQNHAKM |

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| 4276 | 12327 | A | 5196 | 1 | 578 | VAAKCMHKDAKKGFIRLDMS*FOERHE VAKFIGSPPGYVGHEEGQLTKKLKQCF NAVVLDFEVDKAHPDVLTIMLQDFEGR LTDGKGKTDCKDAIFIMTSNVASDEIAQ HALQLRQEALEM SRNRIAE NLGDVQISD KITISKNFENVIRPILKAHFRDEF LGRI NEIVYFLPFCHSELQLVNKEC |
| 4277 | 12328 | A | 5197 | 3 | 1618 | |
| 4278 | 12329 | A | 5198 | 495 | 653 | MILTSDPVLITFFNLECLP/VFTATASSG LGEVE*AIALN |
| 4279 | 12330 | A | 5199 | I | 1433 | MPESNCSLTWRHVSVGRAVAAQGGHESS QGASVLGEPGRGGSSWLLGLEGDTGLW GGLLKEGRLTDGKGKTDCKDAIFIMTS NVASDEIAQHALLRQEALEM SRNRIAE NLGDVQISDKITISKNFENVIRPILKVR GLSWHFLLEPKAHFRDEF LGRI GEIVY FLPFCHSELQLVNKELNFWAKRAKQR HNITLLWDREVADVLVDGYNVHYGA RSNKHEVERVRVNLQAAAL*SRITLLPAG GCTLRITVEDSDKQLKSPLESPQAEKR LPKLRLEIHDKSKTRRLDIRAPLHPEKG RLTDGKGKTDCKDAIFIMTSNVASDEIA QHALLRQEALEM SRNRIAE NLGDVQIS DKITISKNFENVIRPILKVRGLSWHFLLE PKVLTITFFNL SVLYLHGNSIQRLGEVNKL AVLPLRLSLTLHGPNMEEKGYRRARG HSLHQGIEKYCESDDIFRKYCNCNQL |
| 4280 | 12331 | A | 520 | 669 | 823 | |
| 4281 | 12332 | A | 5200 | 1823 | 4712 | FFKKNLCASAHYY/TWCVPLPFFFLRQG L/NSIGQAGVQWCNHSSLOPCPRKLKSL HLSLPSSWDHRHAPLRMT/NFFKYLRG LPVLPRLVSNVAQVVLPS/SASQSIGITD MSH*PAQLPNSLPFFKRQFRSISPLGM Q*CDHSSL*PQTGLKQFHS/PPFYFVQ MGSCYVAPSW*TPKENTIIQHHPHMYT LKTTVTFLYTELYSDIA |
| 4282 | 12333 | A | 5201 | 3 | 298 | RQSCSVA*AAVQWRDLSSLQPPPLGFKR FSCLSLSSWDYRPPFRSVNI*KELIET GFHHLGOAGVERLTSIDPPGASQSAGII GISHCTWPELKF |
| 4283 | 12334 | A | 5202 | 1 | 422 | APMPAATMTARSGPAAISTRCPWRPRSP STPRPSWGTCCAFTRSLRRAATASQGPS PATNTPSPRAASP*RVWAPRTETIKGHT AHSRLTGATTGPKLSAP/VATESGHPDSQ KPPTHPGTSDIILPPETASHPSTRRP*LP ETASHPSTRRP |
| 4284 | 12335 | A | 5203 | 123 | 201 | KRGFCWVPVQGGQGHDFGLWQSPFPGL RQFGFFLWKSWDYGHPPC*ISSSSSSS SVFSSSSSLKLW*GDPLA*VSQRVGIP GLSHWP*PRLGGRGTLVYGNLHFRD |
| 4285 | 12336 | A | 5204 | 88 | 167 | KINMGILLKLVYRNFNPVKTPAGLFSS SHE/TEIDKRILKFIWKCTEHIAKQSLK RTKLEDLLNFKTYEATEIKTS*YRFNI NPVKTPAGLF |
| 4286 | 12337 | A | 5205 | 179 | 474 | FGQINVFKDVPADPNKRSKKGRSLSHR TPAGNFVILE*GKGDLEEGQDLLHTV/ *KNGKVTKAYSFDEIRKNAQLNIELEAA RSLGLMDWVCVVC |
| 4287 | 12338 | A | 5206 | 195 | 351 | |

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| 4288 | 12339 | A | 5207 | 1 | 1080 | ERCTMPDEPLVRAPDKGTDSFSPFPLEET SNGGRMLHESLRHAPVITRMQSSSEDTEA GPAYSDEDDYEDIEPRITLNEITVTDTKT SPWSSVISDTSEVSPQDEVQREGPSCPS PGPFCCREELMVKSSFLSSPERAVNPHLPR QDUSPSQSLVACECEASKARVGGESASA NPQPIPCPILSGAQSSSTFVGWSSPQTDQ NKEPKSEAPAEELKVATS*GSVDS*A*LA FKKLPLNLASQSRRENHKGPPIDSSDIRQ RQVTTGSETSTKQSLLLPGPIVVPNNFLPP QQLEASLKMILSATLPPAATTDQDKSE ATRGALSQRPCRPFPNSLPLNPEETLR IARIFSSQYSQKD |
| 4289 | 12340 | A | 5208 | 1 | 1140 | AJVEDKHSGRSYDITSDLGNVLTSSTIAK TVNG*AESSDSGAESDEEDAQEDLMGA YHSDIDKKMMKIVADHKNLEIVITNGY DKDGFVHDIQNDIHASSSLNGRSTVHVK PIDENLGQIGKSAVCIHQDINDHVEDV TGIQHLTSDSDSEVYCDSEMQFGQEESL DSFTSNNGPFQYLYLVGHSSPPMENSNGFR EDIQPPGNGNIGNMQVVAVEGKGEVK HGGEDGRNNSGAPVHREKRAGETDEFSN VRRGRGHRMQHLSIEGTKGRQVGSGGD GERWGSDRGSRGSLNEQIALVLMRLQE DMQNVLRQLQKLEMLTALQAKSSTSTL QTAPQTSQRPSWPFEMSPGVLTFPI WPFIAQWLVLVLYYQRRRRKLN |
| 4290 | 12341 | C | 5209 | 68 | 331 | MLKNVLMRKCQGVHREKFLVLDFYFCQS SVLAVLYLILSLCYFPYQDVASECEVKC MPTTFQFFKKQKVGFEFSGANKEKLEATI NELV* |
| 4291 | 12342 | A | 521 | 3 | 108 | VCREREHPQKVFNKMPK*SYRTVPVTE GIVLSL |
| 4292 | 12343 | A | 5210 | 935 | 1036 | |
| 4293 | 12344 | A | 5211 | 1 | 3270 | MRPKTFPATTYSGNSRQRLQEIREFGLKQ PSKSSVQGLPAGPNSDTSDLAKVLGSKD ATROQQQMRATPKFGPYQKALREIRYSL LPANESGTSAAAEVNRQMLQELVNAG CDQEMAGRALKQTGSRSEIAALEYISKM GYLDPRNEQIVRVIKQTSFGKGLMPTPV TRRPSFEGTGDSFASYHQLSGTPYEGPSF GADGPTALEEMP/PAVRGLPFPRSPRA RPPAPAPTQQLRCQRRGSRGTLPAAGRA LR |
| 4294 | 12345 | A | 5212 | 3 | 274 | LERLIFVGGLOQFFPPPKLRFEPQLQVLF FSPFPRKKIFPCPRLSLGPPRVLLKGPPS SSSSSSSKK*PLMFYCHRRWPTGVYV LP |
| 4295 | 12346 | A | 5213 | 403 | 776 | QGPDPHSLFWHLHQAQGLSFLCKWATA LETTPSPNGLPIVPVFPSSRMAGMIE/SH IIEIGFLPNKEKKGGCPLFPNFGFKF APSGLKVOYLKVFEPKLNYSDDHVIKW VR*UGRVSGY |
| 4296 | 12347 | A | 5214 | 165 | 439 | PPRQAKMQNLAAPGSHSQSPW/TLRPKA L*LP*SQIFSA*RLKIDTARSFRKPSFQG PVSLASITVVGIDGQASKPLKTPQLWCQ LRQYSFK |
| 4297 | 12348 | A | 5215 | 2 | 525 | AAED*HCPIASETYKTTINELWVILPVEG KSVFPLINTEATHSTLPSFQGPVSLASITV VGIDSQAYKPLKSSQLWCQLGQYSFMH SFLVIPTCPVPLLGQDILTKLSASLTIFGL QPHLIATLFPSLKPPSHPLVSPHLNPHIW DMSTPSLVTDHAPLTIPLKPNHPIPVQC |
| 4298 | 12349 | A | 5216 | 1 | 425 | PGNEIYK/GTISFFEIDGRKNKSYQNLC LLAKCFLDHKLTYYDTPDPLFYVMTEYD CKGFHVGYPSEKKESTEDYNVACILTL PYQR/RGY/GKLLIEFSYELSKVEGKTGTP EKPLSDLGLLSYRSYWSQTINEISEITS |

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| 4299 | 12350 | A | 5217 | 25 | 193 | LGCCEDSRRKGAAPRCFLSRGDHSWEPRD *PPFWLFPNSNC**LAAGRFPVRSPPS |
| 4300 | 12351 | A | 5218 | 1 | 1383 | |
| 4301 | 12352 | A | 5219 | 1 | 1617 | MAEVGEIIEGCRPLVLRNQNDEDEWPL AEILSVKIDISGRKLFYVHYIDFNKRLDEW VTHIERLDLKKIQFPKKEAKTPTKNGLPG SRPGSPEREVPASQAASGKTLPIPVQITLR FNLPKEREAIPOGGEPOQLSSSSCLQPNH RSTKRKVEVVSFATPVSETAPASVTPQN GAARRAVAAQPGRKRSNCLGTDEDSQ DSSDGIPSAAPRMGSLVSDRSHDDIVTR MKNIECIELGRHRLKPWYFSPYPQELTTL PVLVLCFELCKYGRSLKCLQRHLTKCDL RHPPGNEIYRKGTISFFIEDGRKNKYSQ NLCLLAKCFLDHKTLTYDTPFLFYVMT EYDCKGFHIVGYFSKEKEDSTEDYNVACI LTLPPYQRRGYRKILLIEFSEYELSKVEG KTGTPEKPLSDLGLLSYRSYWSQTILEIL MGLSKSGERPOITSNDSIETSIKKEDVI STLQYLNINYYKGQYILTLNSEDIVDGN ERPMLKRLRLRIDS/KCLHFFHSQRTWSQE VDSGDQDTCPHCKCORPASQDLGAD |
| 4302 | 12353 | A | 522 | 383 | 542 | LWSPPNINILDTTAGEPTEQDLNRERER EKE/REERERERERERERERERERERES |
| 4303 | 12354 | A | 5220 | 890 | 1537 | MLLMFICDILLTLSCSIALGYELSKVEGK TGTPKEPLSDLGLLSYRSYWSQTILEILM GLKSESGERPOITK*AWRCLPGGTWHG LSVPGLSGLLGTDCQPGGT*PVLHSE ISEITSIKKEDVISTLQYILNINYY/KGRE GRGDRCVGCRVQSSVG*PPAEPISQAQG QYILTLNSEDIVDGERAMLKRLRLRIDSKC LHFTKDWSKRGKW |
| 4304 | 12355 | A | 5221 | 2 | 434 | LRDGVLLCHPGWSTVAQS*LTAAALNFW VRGSSCLSL*LVLRNSPLHPANLFFYFC R/DKHLTLTLRLVLFNWAQVILRPLPKG LGITGMSHCTQPNFKNQRKGQCVNPN NQTKTLSLAGNTYFTPLFGNKHVTSY NFFSM |
| 4305 | 12356 | A | 5222 | 3 | 384 | VVAAEVPSFFFFLRTESCFTVTAQGLQW HDLGATSU/SPGSSDSPASASQVAGITGR HHYALA*FFVFLVDMGHHVGSQWSRN SLNLVNLPLCLGPPQYWGLOQMSPPMPRP LKCPSLKGKMPNSHP |
| 4306 | 12357 | A | 5223 | 2 | 322 | LYFFSFETESCVTQAGVQ/WWCDLGLSL ATVPPPGSSNSCASAS*VARITGVHIIHAQ LMFVFLVETGFHHFGQSLKPLSDPPAS ASQSAGINRCEPPGTGHYIFYSK |

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| 4307 | 12358 | A | 5224 | I | 2535 | MQPLDFSSGGSDPNISLSEKIRDQLVVGQ LIPDCYVELEKILSERKNVPIEPFVIDRKR LLQLVRENQLQDENELPHAVHFLNESG VLLHFQDPAQLQSDLYFVEPKWLCKJMA QDVSSIFGLYIRDILTVKVEGCPKHPKGII SRRDVEKFLSKKRKFPKNYMSQYFKLLE KFQIALPGEEYLLVPSSLSDHRRVIELPH CENSEIIRLIYEMPYPMPGFWSLRNLRL ISPYMLSGRGCIILGQVVDHIDSLMEEW PPGLLEIDICGEGETLLKKWALYSPNDGE EHQKILLDDLMKKAEEDGDLVNDQDRL TIPISQIAPDLILADPPRNIMLNDELEFEQ APEFLDCFCVCIHLYPSSDYISRHYMRTI NIVQTGFACRWRVTVHGADHGDGSGF SVYRAAYEGEEVAVKIFNKHITSRLRLRQ ELVVLCHLHPSLISLLAAGIRPMLVM ELASKSLDRLLQQDKASLTRLTQHRJA LHVADGLRHLYSAMIYRDLKPHNVLLF TLYPNAAIIAKIADYGIAQ/SL*NGD*KTI QRGTGPFRAPEVARGNVINYQQADVVSF GLLLYDILTGGRIVEGLKFPNEFDELEIQ GKLPDPVKEYGCAPWPMVEKLIKQCLK ENPQERPTSAQVFDILNSAELVCLTRIL LPKNVIVECMVATHHNSRNASIWLGCG HTDRGQSLFDLNTGYTSEEVAADRILC LALVHLPVEKESWVSGTQSGTLVINTE DGKKRHTLEKMTDSVCLYCNPSFKQS KQKNFLLVGTADGKLAIFEDKTVKLKG AAPLKILNIGNVSTPLMCLSESTNTERN VMWGRMVHKKDFLLF |
| 4308 | 12359 | A | 5225 | 2 | 223 | LGVAFQCCFCFWVELFGVGLQLLSNL EKFQPLCLQIFFLSPCIRSLY/C*SSKV SOLTVTLLVFPVFFSL |
| 4309 | 12360 | A | 5226 | 236 | 1626 | LAAAHAHLAAGLVGGEAWIGGAKSWL.SF SAGSSCMAEMATATRLLGWRVASWRL RPLAGFVSQRAHSLLPVDDAINGLSEEQ RQLRQTMAKFLQEHLPKAEIDRSNEF KNLREFWKQLGNLGLVITAPVQYGGG GLGYLEHVLVMEISRASGAVGLSYGAH SNLCINQLVRNGEAOKEKYLPLKISGE YIGALAMSEPNAGFWMVSMKLEAEKK GNHYILNGNKFWTITNGPDADVLIVYAKT DLAAVPA/SRGITAFIVEKGMP/GFSTSKK LDKLGMRGSNTCELIFEDCKIPANILGH ENKGYYVLMGSLDLERLVLAGGLGLA MQAVLADHTIPYLHVREAFGQKIGHFQL MQGKMADMYTRLHGLFGQYVYNVAK ACDEGHIPKDCAGVILYAECATQVAL DGQCFGGNGYINDFPMGRFLRDAKLYE IGAGTSEVRRLVIGRAFNAFDH |
| 4310 | 12361 | A | 5227 | I | 867 | MATATRLUGWRVASWRLRPLAGFVS QRAHSLLPVDDAIGVLR/ESQRQLRQT MAKFLQENLAPKAREIDRSNEFKNLRE FWKQLGEPWAVFGASPLVQY/GGFRP GAYLGSMLG*WEEISPSFSGAVGL/SYG AHSNLSHQPSLLRNWEPRAQKEKYLPEG *FSGEYIGALAMS/KPHAGSDVVSMLKLE AEKKGEATNLGAKMGRGNHYILNGNK FWITNGPDADVLIVYAKTDLAAVPSRG ITAFIVEKGMPGFSKLLDKLGMRGSN TCELIFEDCKIPGK |
| 4311 | 12362 | A | 5228 | 3 | 391 | SHHHPLAAPSLGEAAISRSFQSLACSPGL PAADRLSYSGRPGSRQAGLGRAGDSAV LVLPSPGPRSRSFMSDESGSLLLDEDS EVFKMLQENREGRAAPROSSFRLLQEA LEAEERGOTPAFLASSLSPQSLARLQOG/ GLATPPKLHTCEKSTSIANQAVRIQOGR YRHPGCYTCADCGLLNLRKGHFVWG DELYCEKHARQRYAPATLSSRA*AFFG |

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| | | | | | | SCRKPWKLRREVARQPSWPAH |
| 4312 | 12363 | A | 5229 | 2 | 384 | FVHFQSKKTMRKICLFFFSSETGSRSVS QAGVQ/WARVIAHCNLKLLDSSDLPALA LAS*VARTVGMVHRGLACVYFIQNLIL YFLAQMNKKHQTFLEYEMLNLIASQA GKIYSSNRNIKVFWPQ |
| 4313 | 12364 | A | 523 | 389 | 549 | ERKRPSRKQ/RERNRKNQNERKSRGDW QRANVGAGQKEEMKCLAVEIGSQPR S |
| 4314 | 12365 | C | 5230 | 301 | 369 | MPTLYNHCFQLFTIISKLSIY* |
| 4315 | 12366 | C | 5231 | 210 | 329 | MWNLCIWRVNCTINNTNMPITLYNHCF QLFTIISKLSIY* |
| 4316 | 12367 | A | 5232 | 2 | 268 | FFFLKRD/RVSFCHPGLSAVAQL*LTVAL NS*VKGSSYLSFQS/SWHYRYVLPYLAN FKNFFFKRRELTFLRLILTSWAQVSFLL QPPK |
| 4317 | 12368 | A | 5233 | 1 | 415 | LFAGPSAMFYLAASVDFYVPVSEMP /KIQSSGGPLQITMKMVPKLLSPLVKDW APKAFIISKLETDP/IVINRARKALEIYQ HQVVVANILESRQSFVIVTKDSETKLVS THSFYR*QKLL*KALIGSKIVQGS |
| 4318 | 12369 | A | 5234 | 3 | 705 | PVRFLDNFSSGRRGATS/AEFLAAGYGV LFLYRARSAPFYAHRFPQTWLSALRPS GPALSGLLSLEAEENALPGFAELRSYQ EAAAAGTFLAVEFTTLADYLHLQAAA QALNPLGPSAMFYLAASVDFYVPVSE MPEHKIQSSGGPLQITMKMVPKLLSPLV KDWAPKAFIISKLETDP/IVINRARKAL EIQHQVVVANILESRQSFVIVTKDSE KLLSSEKKK |
| 4319 | 12370 | A | 5235 | 200 | 636 | GPCAMFYLAASVDFYVPVSEMP /SSGGPLQITMKMVPKLLSPLVKDWAPK AFIISKLET*PR/LVINRARKALEIYQHQ VVVANILGVKDSPLCLL*PKDSEPKLL SEEEIEKGVEIEKIVDNLSRHTAFIGDR N |
| 4320 | 12371 | A | 5236 | 17 | 424 | |
| 4321 | 12372 | A | 5237 | 1 | 338 | SDRQLDC/ALDLMR/LPQQIGKNLSNLI DLVPSLCELLSSVDQPLKIARDKVVAK DYLLCDYNRDGDSYRSPWSNKYDPPLE DGAMPSARLRKLQVEACPHSTLSVLST FP |
| 4322 | 12373 | A | 5238 | 2 | 160 | |
| 4323 | 12374 | B | 5239 | 46 | 426 | MSDQQLDCALDMRRLPQQIEKNLSL IDLVPSLCELLSSVDQPLKIARDKVVAK DYLLCDYNRDGDSYRSPMEVTKYDPSL GRMGGAVALKRAEKSLEVGKANKWPF DQYPKTLLELLDLP* |
| 4324 | 12375 | A | 524 | 1 | 495 | EELVPITLTLFHKIEKGTLPNSFYEASITL IPKPGKDITKKNYRWSLNMNIDAKILNK ILANQIQQITKLIHHDQVGFIPMGQGW NMHKINVINHVRKNKNHMSIDAEK AFDKIQHPMIKTLK/MGIQGTYSVK AIYDKPTANIKQTFQIQD |

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| 4325 | 12376 | A | 5240 | 2 | 938 | PRVR*APGPAAGGRATDAGTGTAAAAAT TMSDQHLDCALDKRRLRFQIEKNLSD LIDLVPSLCEDLLSSVDQPLKGIARDKVVVG QDYLLCDYNIDGDSYRSPWSNKDDPPL DGAMPSARLRKLEVEANNAEDQYRDL YF*KVGVSSVYVLWDLHGFGLS/VILH KRKGWEDGIRKRSKGCWDSHNVVEVQ EKSSGRTHYKLTSTVMLWLQTNKSQS CTMNLGGSLLTQMEKDETSDCSQJIS/ ATIGRLVEDMENKIRSTLNEIFYGKNKG YRSMGLRSVQTFVADNSKQEALEELTLV GGFERESKQC |
| 4326 | 12377 | A | 5241 | 1 | 1911 | |
| 4327 | 12378 | A | 5242 | 3 | 803 | ESVAAALSPLGIEVDHIDVEHGGKRSRLT PVSPPEVSATGEKSSSQSSCCSDPSKPG GNVEGATQSLAEQMRKIALESEGRPEAS LCFPPPTGTTGQPSDLWPAPPHSQHLCS PTYKPEGAGCWLAVDVCCHLKSRWEPA RTL*LLGLCEWPLFLDPCSLNCTCACVL PDCLPARAMVRLGLLRVSPVCSW*VLF QEOMESDNCSGGDDDDWTHLSSEVDPS TGELQSLQMPSESGPSSLDPSQEGPTGLK EAALYPHLPPOK |
| 4328 | 12379 | A | 5243 | 2 | 1511 | RGGCDRDPGPFSSFLAMASLTVKAYLL GKEDAAEIRRFSCCSEPEAEAEAAAAG PGPCERLLSRVAALFPALRPGGQAHYR DEDGDLVAFSSDEELTMAMSYVKDDIFR IYIEKKECRRDRHPCAQEAAPRNMVHP NVICDGCNGPVVGTTRYKSCVCPDYDLC VCEGKGLHRGHTKLAFSPFGHLSSEF HSRWLRKVKHGFGWPGWEMGPPGN WSPRPRAAGEARPGFTAESASQPSSEDPSV NFLKNVGESVAAALSPLGIEVDHIDVEH GKRSRLTPVSPSSSTEES*SSQPSSCCS DPSKPGNVEGATQSLAEQMRKIALES EGRPEEQMESDNC/SQGGDDDDWTHLS KEVDPS*STGELQSLQ/MPSESGPKLSGTP PREGPTGLERKLPYHPLPVEVDPRDL SPFSQIACSMGLSS*LKGLGSTRVGR KNY*HSERLWDTIQYYSKHPPAVVDHFL PTFFLRAPLLVFIVVFKLCVELAGLL |
| 4329 | 12380 | A | 5244 | 24 | 493 | HWQVLPVRKRLSPLKTHNCALPSTKLS AVRDYLFYSENLFNPQLNKDS*RG*QA LK/SPTAVVFLVLSHSFSFVSEGCFFHR ERQVASTSMEQLLSLLAGIPFVEDSCPLQ KELSKTLPLTLEVLGVSMFFKSWLPVI WVFGFISQLSGLES |
| 4330 | 12381 | A | 5245 | 1 | 4547 | MNRNPVHSHIGATVSHQTDFGANVPNMP ALQSOLITSDTYSMQMQMPNSNTRLPV AYQGNQGLNQSFSEQQVDWTOQCISKG LTYPDYRPPPKLYRYSQPSFLPDSTIQKQ NFIPHTSLQVKNSQLLSVLTLSRQTS VPSQQYATQIDKRPPPPYNCRYGSQPL QSTQHTKHLMEVPSQREMLSSERTSF QQQWQNPNNVSTIGNFTNLKVNNSK QPFNSPIRSSVDGVQTLAQTNEEKIMDSC NP |
| 4331 | 12382 | C | 5246 | 191 | 397 | MLPRAGLLCGKLVNPNFSQPSRQILCL GCDSPHLTVGHEGWKTLTGAGATPYRI GPFSLLQRGV* |
| 4332 | 12383 | C | 5247 | 598 | 744 | MSKVLNQSTYTVQCGVYSINSFYVSFY YSIKLAKRHLGFIFFRTVLVI* |
| 4333 | 12384 | A | 5248 | 164 | 355 | NGSTGIGIQANQYFNYSRSSFESGKFV KCTEQLEVPGENIH*LEGSKKKILIK NLFRNM |
| 4334 | 12385 | A | 5249 | 1 | 308 | KVQSFIFLYFIYF*DGW*LFRPGWSAVV LSRLTATSA/FRFKQFCSLSPSSWDYRC PPLHLANFCIF**RRGFMTLRLVSI*PQ VIRPPWPKVLGLQM |

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| 4335 | 12386 | A | 525 | 219 | 471 | INFKKKNRLFNKWWYWTVCATLEKNKM NSFLMIYPKSNK*FKNPNVRGKKL*NL ILLYYKF |
| 4336 | 12387 | A | 5250 | 67 | 367 | SDELRTPGRESLPAENISL*DRVNHQPAIE SCTA*NYLYSINAKTKGEMLEAEGMRV VTNSVYHWRLCEKQQTVMKAGCWRT DKLCLPPEGMLWAVMSR |
| 4337 | 12388 | A | 5251 | 1429 | 1621 | IPWIPPVSRSMVTHTRAPTRFVHLPPFQ TDPFVFVIFISAVLLRLVQKQ*QVVPDQ GPERGR |
| 4338 | 12389 | A | 5252 | 180 | 411 | IPWIPPV/CPFHGHTHLE/VHPHGLSISLYS PPADSPVQGFVVRLLISFTFSALADLPRSG PWSDTTCHGCTVAASSESL |
| 4339 | 12390 | A | 5253 | 288 | 530 | |
| 4340 | 12391 | A | 5254 | 9 | 257 | IFTAVAFTISESWKQPCLTNE*/IKLWYI HTMQYYSAIKRNEKLIHATTWMNSENV QW*KARHKKPHIV*LHLYEGSQKRO |
| 4341 | 12392 | A | 5255 | 6215 | 7038 | RTVTTLFSKDSHGYVCAQGGKIPDHQNP QCNRKQHPVSTILMLDKASFCQJLRKRKH NLSVNCINRNPFMSLKNTSWHSSLSVTQ RHQQQSKLHFQGSILLH*PSQNL/SNI*K CINYC*HCSSVLLSYLFETESYSVAQAG VQWHDGLGLQLPLRFKQFCFSLPSSW DYRSAPSCPANFCILVEMGFCHVQAGL KLASSDPPALASQASAGITGVSHYTQPCS PFLKSTGLFSCKVLSPNYHKGRIYILGRM CFLNSTWHLVKSTLFCFLFI |
| 4342 | 12393 | A | 5256 | 2 | 513 | VLIQLVWIALLLVDPSPRVLTKDPEASS TSSFTSQSQKKQQSGFLQSRN*GCIALC E/VFQREIY*VGMD*DSFRKWFFNFIFH LITVITSSDLHIHGEIWWVPNTDHCVRFF FVYDDCLVYYAYENTLL*GFY*YILLVIV NYTGSVHWFIYYLVNLVLCFLLYI |
| 4343 | 12394 | A | 5257 | I | 274 | STPPHSSQRACEPLPSFAQCPR*APSPAP HCALICPIPKMEER/PM*IGR*RRHLLST YCARSCTEQAPCILLNPHNVLDLSRLW VKGQ |
| 4344 | 12395 | A | 5258 | 3 | 436 | GYLSEVVEENTPPKMEKEGLEIMIGKKK GIQGHYNSCYLDSTLFCLEAFSSVLDTVL LRPKEKNDVEYYSETQELLRTI/VNPLRI YGYVCA*TKIMKLRKILEKVEAASGFTSE EKD/PAGQKVQDCYFYQIFMEKNEKVG VPTIQ |
| 4345 | 12396 | A | 5259 | I | 340 | |
| 4346 | 12397 | A | 526 | I | 1423 | MNPNQEEISDLPERIOFTEKEGTLPSNFY EASITLIPKLGDKDKKENYRPSIMMNI ANILNKILANOQOHHKIIHHDOVGFISQ MQGWFNIHRSINVIHHNRKKNHMIISI DAEKAFDKIQHFMIKTLISKIGQAGAYLN VIKAIYDKPTANIIILNGKKVEAFPLRTGT RQGYPLSQLEFFNIALEVLARAIQENEIK GHIIGKEKVKLSLAFAGDMIFLENPKDSS KKLLELIKELSKVSRWELNNENTWTQGG EHITPGPVVSGSEERGIALGDTPNVNDK PLTGAALASTLGVWENENKFILHFNHIS QFCPLPSGIFLCTGSTYVCLTTNWITSTC TLIFLSPKIDAPGNQILPVVPAQVHQH RAVQIPLLIJLGVTNATGTIGIAGLSPLS YYHTLSKDLSDSLQDIAKSTLTLQSQIDS LAAVTLQNHRLRPNRRKKRWAMHLFR GRLFFHQPVWD |
| 4347 | 12398 | A | 5260 | 215 | 384 | |

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| 4348 | 12399 | B | 5261 | 347 | 1742 | MPNTNGSIGHSPLSLSAQSVMEELNTAP VQESPPLAMPNGNSHGLEVGSIAEVKEN PPFYGVIRWIGQPPGLNEVLAGELEDEDEC AGWYGNLQEGTRVFTCALKKALFVK LKSCRPSDSSVLDITVLLRPKEKNDVEYFY SETQELLRTIENVPLRISAGQKVQDCYFY QIFMEKNEKVGVPITQQLLEWFSFNSNLK FAEAPSCIQMPRFGKDFKLPKKIFPSLE LNITDLEDTPRQCRICGGLAMYECREC YDDPDISAGKIQCFCKTCTNTQVHLHPKR LNHKNYPVSLPKDLPDWDWRHGCIFCQ NMELFAVLCTIETHYVAFVKYKGDSDA WLFDSMADRDESNNEFVQITGVIGKSK ETEGRVLTLHLIRAGSSVHVHCRQWMSL W* |
| 4349 | 12400 | A | 5262 | 1 | 1547 | PVQESPPLAMPNGNSHGLEVGSIAEVKE NPPFYGVIRWIGQPPGLNEVLAGELEDE CAGCTDGTFRGTRYFTCALKKALFVKL KSCRPSDSSVLDITVLLRPKEKNDVEYFY AYLSEVVEENTPTQKWEKEGLEIMIGKK KQIQGHYNSCYLDSTLFCFAFSSVLDITV LLRPKEKNDVEYFYSETQELLRTIENVPLR IYGYVCATKIMKLRKILEKVEAASGFTSE EKDPFEFLNILFHHLRVEPLLKIRSAQGV VQDCYFYQIFMGKK*GKLGVPITSGSC*E WFSFNSNLKFAEAPSCIQMPRFGKDF KLPKKIFPSLELNTDLEDTPRQCRICG GLAMYECRECYDDPDISAGKIQCFCKT NTQVHLHPKRLNHNKYNPVSPLKDLPDW ELARHGCPQNMELFAVLCTIETHYVAF VKYKGDSDA WLFDSMADRDESNNEFVQITGVIGKSK FNIFQVTPCPEVGEYLEDVSWKTLHSLG LPGESQGCARRLLCDAIYVPTQSPMTMS LYK |
| 4350 | 12401 | A | 5263 | 29 | 258 | LRKYHATDLIS*GSVVGEFDDCF*SLDGL SLEDAVDGLLALALQPHKEQYKEFDLNL QEVMLNDLILKYSTFSQKLD |
| 4351 | 12402 | A | 5264 | 98 | 497 | THENNNEKKEDEIKFISILQISAQEEFFP FRRWKSCCLCPRLGVQWHDGLSQPPT SP/GKFRFSGKLPL/RAAWIYRVPTISG* FLYFQ*RRGFTHVGQADLLDTSQDPFV WASQAGITGVSHHAQPPYC |
| 4352 | 12403 | A | 5265 | 156 | 1047 | VPAGEARVQWHDGLSLQPPPGSSDSP ASSSRVAGITGKNTICKCAQNVQLYG TPKPCQYCNIIAIFIGNKCORCTNSEKKY GPPYSCQCKQCAFDRKDDRKVDGK LLCWLCTLSYKRVLQKTBQRKHLSSSS RAGHQEKEQYSRLSGGGHYNSQKTLSTS SIQNEIPKKSKFESITTTNGDSFSDLALD SPGTDHFVIAQLKEEVATLKKMLHQKQ QMLEKEKKITELKADFOYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITS |
| 4353 | 12404 | A | 5266 | 156 | 960 | VPAGEARVQWHDGLSLQPPPGSSDSP ASSSRVAGITGKNTICKCAQNVQLYG TPKPCQYCNIIAIFIGNKCORCTNSEKKY GPPYSCQCKQCAFDRKDDRKVDGK LLCWLCTLSYKRVLQKTBQRKHLSSSS RAGHQEKEQYSRLSGGGHYNSFSDLALD DSPGTDHFVIAQLKEEVATLKKMLHQK QMLEKEKKITELKADFOYQESQMRK MNQMEKTHKEVTEQLQAKNRELLKQA AALSKSKKSEKSGAITS |
| 4354 | 12405 | A | 5267 | 4 | 496 | DGFPSCCQAGVO*HDLGSRQPPPGSSD SPASASRVAGITGMHH*SRDVLIRILELE EGLELCPHFSVRKLPKTGQILTMLSLAP VKLAPQPKLSWMLTRTQQA VSPFGR WGGIGRRKVLVPIAADGWSAQARGLL GSGKGGBGKATGCREGTCLLQ |

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| 4355 | 12406 | C | 5268 | 190 | 435 | |
| 4356 | 12407 | A | 5269 | 114 | 267 | OLYINHTPPLSKSKEREMDKDLDKSR TLKQKQKPLNVVHNSWF*DHSN |
| 4357 | 12408 | A | 527 | 31 | 332 | |
| 4358 | 12409 | A | 5270 | 1 | 1071 | |
| 4359 | 12410 | A | 5271 | 1 | 1231 | GRFLCCMLTEVTRWHSADRATYEKECGN YPGFLTILRATGFDGNGKADQLDYENFR HVVHKWHYKLTASVHCLETGEYTHIR NILIVLTKILPWYPKVLNLGQALERRVHK IQEKEKRPDLYALAMGYKIIF*CDLQ D*MTEGF*RL*NLVQC*SLSSAFRLWEI MRSCFHRLVRVTSDYQLPVYTG**FF*S HV*YFLIGRKYNFIIIVNRSRVRKKKPS* FKD*FIGKL*FLRKLGLV*KPSRTY*KWV FFNSLEPHSRMNNLLILFLTKSCLCLIW VCIFKHVRLSSYSQGLK*EKSIP*YPEN EFPSPRPNNNAVAVS VQNGPGGPPSS SIGSASKSDSSTETDKSRERSQCVKA VNKASSTTPKGNSSNGSGSNSNKAVKE NDKEKGKEK |
| 4360 | 12411 | A | 5272 | 2 | 3383 | ITDQVLLPSLIMDCNACMSSELWGMF KTFPYQHRYRLYGQWKNETYNSIPLIV KVKAQIDRAKYIMKRLTKENVKPSGRQ IGKLSHNSPTILFDYVCFEISQIQKYDNL ITPVVDSLKYLTSNYDVLACISNCIEA LANPEKERMKHDDTISSWQSLASFCG AVFRKYPIDLAGLLQYVANQLKAGKSF DLLILKEVVQKMAGIEITEEMTMEQLEA MTGGEQLKAEGGYFGQIRNTKSSQRL KDA |
| 4361 | 12412 | A | 5273 | 442 | 1457 | KHFLYIYAQMNCFSRLRKKKKKNOLL LQVFSADA*GSSSSSSSSGHKHKHKH RNRSESSRRSRHSSRASSNQIDQNR* VLPSS*YFISFNP*TRSGKILLQKQDR LQYEKTOIKEKDRCPLESSLEIPDDFG RSEDPRDFYNSYKTOAGSSKTEPKYKSE DIFPARRNSDSFCRNSEAKIYGRYRFEK DIEGRKEHYRRWEPGSRVHSTSPASSEY SWKSVEKYKKAHSGSRDFSRHEQRVYR LNTNQGEYEREDNYGEDIKTEVPEDAL SSKEHSESSVKAKFTSEFTEY*SDS*IK RKRK*GQKINTPKDIGHPLPONAH |
| 4362 | 12413 | A | 5274 | 2 | 457 | KLIFFPRKFSAPQEGRFQFC*KIGNRPTQL TGPVMPVRVYKKEKARVITEKEKNP QSPCLVFVMARAKIARLFGIRAKKSPRK PQNDQVEKEKIKTLPGNFEISLAVMPGSP TWCVSQTTWALGWGFTACDFLLPRGF GAFLKROVQAPG |
| 4363 | 12414 | C | 5275 | 27 | 158 | MHSKPTGQVSWLGMTTASPLGTNASSM WMPWRLEDHNSLDALP* |
| 4364 | 12415 | A | 5276 | 1 | 320 | |
| 4365 | 12416 | A | 5277 | 100 | 659 | CPLVIRSCSSALWDIETGQQTTTFTGHTG DVMSLSLAPDTRLFVSGACDASAKLWD VYSQCFPLSVYMMMS*FAPSFQFPNGNA FATGSDDATCRFLDLRADQELMTLTPHD NIICGITSVSFSKSGRLLLAGYDDFNCNV WDALKADRAGVLAGHDNRVSLGVTD DGMVAVATGSWDSFLKIWN |
| 4366 | 12417 | A | 5278 | 16 | 495 | AFSAPDTRLFVSGVACNASAKLWNVGE GMCQGTFTHGESDINAVCFPPNGNAPAT GSDDATCRFLDLRADQELMTYPHDNII CGITSVSFSKSGRLPPGMGITTNFNCNVW DALKSRTGQVFLAGHDNRVSLGVTD DVGMAVATGSWDSFPODLGN |
| 4367 | 12418 | A | 5279 | 5 | 108 | SRGFTLLARLVLS*PQCDPPLASQSA GI/TRLGMSYHA*PIIIFETRSRSVTDG/G VQ*CNHGLLPWHPGLKESSCLSLPG/G HAPPHLANFICRNRVSLCCSGWS*SSD |

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| | | | | | PPLPLASQSAGIHWV |
| 4368 | 12419 | A | 528 | 27 | 178 |
| 4369 | 12420 | A | 5280 | 1 | 458 |
| 4370 | 12421 | B | 5281 | 403 | 629 |
| | | | | | XVHLVKASQACGLDRVRKQVNVNPS FIVRLDSQKHIDFSLRSPYGGGRPGRVKR KNAKKGQGGAGAGDDEED* |
| 4371 | 12422 | A | 5282 | 1 | 637 |
| | | | | | PVARSWVCRKTYGDPGRGGPFKVSRLDQ VELKLIGGVWGSGTKREVLVRVKFTLAQD SAKAAPGNWLNLEKDPGTGVLFERQTP LLR/RLGVPLQGLGCWDEGQKMKLVDYIPG P*RLEDFFRETTCKTQVQSLGLAKSHQ PRFACLSRQRHVRKQVNVNPSFTRV LDSQKHIDFSLRSPYGGGRPAVRKRN AKKGGQGGAGAGDDEED |
| 4372 | 12423 | A | 5283 | 3 | 295 |
| | | | | | VCIGVLLCCLGCGVRWHDHASL*P*PPG LKRSSHLSLSTWDRHMLTHPLNFFTV EPRSHYVAQTGLKLLGSSPPASASQSAR ITGVSHHTQSKK*FLFVEPRSHYVAQTGL KLLGSSPPASASQSARITGVSHHTQSKK |
| 4373 | 12424 | A | 5284 | 2 | 284 |
| 4374 | 12425 | A | 5285 | 1 | 785 |
| | | | | | MTGLALLYSGVVFVAFWACALAVACWV NSGTDWAGGIWLERLIPRSRLGFLGAGG DPACAGVCYTIFDLGRFVDAWFLTETS PFMWNLGVLALISLVVGAAGWGHSLT GSSIHVVEGS*KAPRDSKTKNLVSIIFCE AVAIYGIIMGNCSLNMTPEFSATEPQG HRQFGN*PWQGYSHGLGAGLHRKPCLN LFCGVCGVIGTWGCPWQMPQNPTASL CKRFSIVEIFWQAPLALFGVIGRKFFKTS MSERWVTR |
| 4375 | 12426 | A | 5286 | 2 | 350 |
| 4376 | 12427 | A | 5287 | 1 | 999 |
| | | | | | NLLKTHKFULLGQDEDSLHSPVPAQMGN YQEYLKTLASPLREIDPDQKRLHTGPN FKODKKGMMDIADEFVAGPQNKVKRP GEPNMSYVTKRRRSMSSLLLRKPQTPPTC NNHVGGKPPASWFPSPYNLKPTLVH TDATIHHDGHEEKMEHQITPDGFLSKSA PSELNMTGDLMPPNQVDSLDDFTLSLK DGLIQNLVVTHL*EKPATAAS*MTKKT Q*HLLWELCQHYKSLLLWHKE/VNADI KHQLMKEVRKFRKYERIFILLEEVQGP LEMKKOFVEFTIKAAARFKRRVLIQYLE KVLEKINSIHILNISHINSRSSC |
| 4377 | 12428 | A | 5288 | 329 | 661 |
| | | | | | ITLSLSFFNLRFSEFALLAQAGVHWDRDL SLQPPFLRFK*FSYLSKPSRWDVGHAPP RPANSVLLVETGSLHVSQGLILPTSGDP PASASQASAGITGVNCAFPPLSFS |
| 4378 | 12429 | A | 5289 | 46 | 554 |
| | | | | | NKTRKDPFPPTPAHGHTPPTSLPFG/C SAHGHLPKRGSHCDQPPSTCRPPVQSPV AHASQVAGRTWA*KRALHLPGGGVKRR GTGSPKAPRSGCGLPYKLGSTARAAGSC SPA/EPEFTSPQGQLPVNKGKLRVVGQ PSFQCAPRDSCRYFQFGEEGRAIEHQI P |
| 4379 | 12430 | B | 529 | 110 | 719 |
| | | | | | XGRQOQHRWHETPDIKLFGKWTSDDVQ INDISLDYIAVKEKYAKYLPHSAGRYA AKRFRKAQCPIVERLTNSMMMHGRNNG QEAHDCAHRQAICLRDHNTCSQAKNILE VRGTAINSGPREDDTRIGRAGTVRRQAV DVSPLRRVNQAIWLLCTGAREAAFRNIK TIAECLADELINAAGSSNSYAINKKDEL ERVAKSNR* |
| 4380 | 12431 | A | 5290 | 228 | 386 |

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| 4381 | 12432 | A | 5291 | 3 | 257 | GPRERETGRATAVEPDSCEERTYSNDT KRWCSHPGGNGVPERQH.G*ATGSW GAKPLRLAAATRASNGPHRSCLKL.ETI F |
| 4382 | 12433 | A | 5292 | 3 | 1379 | NEFFGEGKTLQAARHFAAMKALQALQN EPIPERSPONGESGKMDDDDKDANKSEI SLVFEIALKRNPVSEVIEKESGPHMKXS FVTRVSVGEFSAEAGEGSKKLSKRAAT TVLQELKKLPPLPVVEKPKVHFKKRPAKT IVKAGPEYCOGMNPIRLAQIQQAKKEK EPDYVLLSERGMP*REFVMQVQKVGNE VATGTGPNNKAKKKKINVAAMLQLQG YKASINLQDQLEKTEGENKQWSDPTGFP EPTNNTPKGLHLSPDVYQEMEAHHIKV TS/GHYSRLFLVTRQYEPFKLFSSVYLP RIVQSTFARHLLMNGTSSAEIAGLKGS PUPLVPPVQPSKQLGIFSKGFAFRVHYC DRQKQWQVCDLSDISPCADGL/SHAIGSS IEASHDQAAL.SALKQFSEQGLDPIDGSM NIEKGSLEKQAKHLIKKVDHNAQPPGSGIA HDCCKISNSAV |
| 4383 | 12434 | A | 5293 | 7 | 351 | SSTSLIRKMQIKTTRYQNIPNRMAKIKNA DNTKL/WSRILTNVWWEYRHLHK*KYV HKKTCNFMFLAALFIKFLKWKCKFHSST GE*IIKL*DRHMTYY*AIKKAQATDRM QHE |
| 4384 | 12435 | A | 5294 | 3 | 1585 | GEPL/LHHTTCH/NSKALIAFLAFLIIVTSI ALLVVLTNVYDLHRKRSNVDQEQLVE RYDESNLMNVQPIHADIMLETYHRRIA/D EGRFLFAEFQSIPRVPSFKPIKEARKTHN QNKNRVYDILPYDYNRVELSEINGDAGS NYNNASVYDGFKEPRKYIAAQPRDET DDFWRMWVQKATVIMVTRCEEGRNRN KCAEYVPSMEEGTRAFGECCCKDLTKH KRCPDYIIQKLNIVNKEKATGREVTHI QFTSPWDPHGVPEDPHLLKLRRRVNAPS NFFSGPIVVHCSAGVGRGTGYIDAMLE GLEAENKVDVYGVVVKLRQRCLMVQ VEVCNLI*DYSHFGFLDLNLFQVIMIFF KNPNSSQPQTVDLFLKTKTW*SPWPM CIW |
| 4385 | 12436 | A | 5295 | 1 | 1323 | MEDSRKAQKRDTKIEREEQLYWPSSRKR GKSGDLVLHTTYKPSHSGGRAVSGLFG SPIPSLGSWTAFLDPPWARVEPIALKGLT QRSNPGGHRVCFVIPPAPPDGSEQKKR LCSFRRKEQSLPGNLENSFGSCPRLSRQY VYESARTTALMRLGCLKQIQLSQDLSP FEYRESLPMKDKQNKHQIRISLINTIQUET ISPNELSKSPGTNSGETEIHDLSDREFKIA VLRTLKEIQDNTKEFKLQYNLTKRIEII KKNQAEILELRNAIGIQKNASQSFNSRNG REEEIISELENRLFENTQRRQNKRIKNNK ACLDLEYRLKRANLRVIGLKEEVEKAI GVESLFGHITENFPSLEQDINIQQVQEGY TPSRFNPKKTTSRILIVKLKIRDKERILK VTRENKQVT*NGTHICLAADFSVVAL*A RREWH |
| 4386 | 12437 | A | 5297 | 3 | 226 | GSCEQCGCPGPRYGFPGCEQLCGCLNGGS CDAATGACRCPTGFLGTDNLTCPQGRF GPNCTHVCGCGGAACDPVTGTCCLCPP GRAGVRCERGCPQNRFGVGCEHTCSCR NGGLCHASNGSCGLGWTRHCELAC PPGRYGAACHLECSCHNNSTCEPATGTC RCQPGFYGQACEHPGPFHAGCQGL CRCQHGAPCDPISGRCLCPAGFHGHFCE RGCEPFSFEGCHQRCDCDGGAPCDPV TGLCLCPPGRSGATCNLDCCRQGFQGPSC TLHCDCGGGADCDPVSGQCHCVDGYM GPTCREVPGSGSPRTR*PRGPAAPLGS |

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| | | | | | | SGRTATSPVRRASAPTAPTCVGVGRGR PATL |
| 4387 | 12438 | A | 5298 | 152 | 990 | LLLIHSEKPFEDNLYGKALSSNSHLHGP RRLCT/GENPEE/CEQL*KAFSAISRDCD SSIP*GRKPVKVEGFSDSHPLRHTGNHT MEQHEMRNTLQKQCSHY*ANYSVVFC S*LWESLECSIGF*GDLRINSGENAPFEHH QYWRAFWSTFVKET/W*SIHTTEK/PWK F*EEKAFSDASVLGK/HMELLPGCKTYE YINIGKFFSDSSLSCI/WRELTWRNP*ECN QC*DAFSLNSSLG/HQFSLGTKKYNHC FECGISFIQCLICRLDCWLINFFSLFFF |
| 4388 | 12439 | A | 5299 | 1 | 181 | EIEDLN*TTTQLYLT*HLYRTLHRTTPAYK FFSSVHETFSRIDHVLVLEHKTSLNEP*RLK |
| 4389 | 12440 | A | 530 | 443 | 565 | QPGFGAGARAPNLTTHKHLGLLEFKTTG AQQQGF*LNESSF |
| 4390 | 12441 | A | 5300 | 1 | 170 | PPPPFFFLIPD*G*PPSPLSGQQLSAPPP WLPSPDITLSYPGRRPVLGLSLMD |
| 4391 | 12442 | A | 5301 | 846 | 1094 | IPALP*FYFIFVYLNILKYLFFFFD/DGVL LCCPAWSAVA*SRLTATFASQVKRFSC LLSSWYYRSVP/SSLANFCISRDG/SFV LAMLVLNS*PQVILLPWPPKVL*LPIMEC SSLTIAHCSLNLPGTSMPPASASK |
| 4392 | 12443 | A | 5302 | 19 | 391 | AYPLRGGRDFLRGGPSRSVSLSVVPA V*RRRRRLREERAGAMTSASTKVGEIFS AAGAAFTKLGLTMDLHPVADSSPAGA KWTEIEMIARAARKRGDDLNHISCVI KGPDKGHCEQTQI |
| 4393 | 12444 | A | 5303 | 1 | 338 | SLFSDSLSSIGTNTLAAFLSWMLPYIPW ILQARPALGLLHLLAACNVVGGSAT*PS PSLPLGLCSSSHSQ*GLF*PPVFKISPLTD NPFPDLHLMDFIQTKIKISL |
| 4394 | 12445 | A | 5304 | 3 | 180 | |
| 4395 | 12446 | A | 5305 | 1 | 518 | RAAQSPSPWSRLACSGGGGVIREEARG AMTSASTKVGEIFSAAAGAAFTKLGLTMD QLHPVADSSPAGAKWTETIEM/PEGCC EATWGRS*SHQLCHQGTDSGPDKGHC*N ARYIEDFWASPPA*V/PRKGPWRWASG VFVHLLQLAPPPQLPVFPBGRGSPPIKE TERLM |
| 4396 | 12447 | A | 5306 | 1 | 705 | GAKFQRTSRVPRTTGPQGLKCLEDKVSR LETTELDEEKNTVELLTDRLNRGRDQVD QLRTLMQERS*SSGRTWKCDKISLERQ NKDLKTRLASSEG/SPESLVPASLSLSPRI SCCRERLPAEQRVKTVLRSNTNRKLERKV N*LSLQIEDERHHVSDTKDQSLSRVKAL KRQVDEAKEEIERLDGLR/KKAQREVEE QHEVNEQLQARIKSLEKDSWRK/GFPLS C*VSSQKRRAELR |
| 4397 | 12448 | A | 5307 | 831 | 1159 | DVKSXSFFFLRWLSLNPFAQAGV*WHD LSSLQPLPHRFKQFCSLLSS*DYRRVPP *LANFLY**RQGFMTLRLASNS*PHDP PASASQSGITGMSHRTQKKQIS |
| 4398 | 12449 | A | 5308 | 296 | 526 | PNCCEEEKPKKPCFVSFLEGLERG*VK CQEHIPDTH***LLGLEQINSRRLRKEL NHFILFLEQLTCPHSRER |

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| 4399 | 12450 | A | 5309 | 5424 | 5957 | YNEFLNEMGSCSVAQAGVQWVHNSLSQ P*TLG*SSYHPASAS*VAGTVCTCHHVQL VF/FFFLR*SFALVAQAGVQWCDLGSPL PPPSGFERFSCGLPSSWDYRFPJHLVN FFFLYF**RWGFTMLARLVNS*PHDHP ASASQSGITGMSHHVWLNFFFNCKSLI FSNVFRN |
| 4400 | 12451 | A | 531 | 82 | 986 | TMNTRNRGVNSGLGASPASRPTDRPDQD SGRQGLSPVEDQREGLEAAPKGPSRES VVHAGQRRKTSAYTLAFNINRRNEIQRIA ELELANLEKWKQNRKAPVHLVPRRLG GQSSETEVRQKQQLQLMQSKYKQKLKR EESVRIKKEAEAEQLQKMAIKREKSNK LEEKRLQENLRREAFREHQYKTAEFLL /RQTEHRIARQKCLSKCCLWPTILNMGQ KLGLQDLSLKAENRKLQKMKDEQHQK SELLELRQQQEQERAKIHQTEHRVNN AFLDRLRROKSTRWPRAIWKLEYE |
| 4401 | 12452 | A | 5310 | 2 | 237 | IKRF-SYLSLPSNWDYKVPSSMPG*FLYF* LR*GFTNVGQAGFEIP*PQDNDNPLSSQS AGITGMSHHNRPLFLYFLK |
| 4402 | 12453 | A | 5311 | 36 | 386 | LNHRKFMLLYYH*LLFLHFH*DRVSV CHPGWSTVVNSQOFTAALTYWVK*SS CFNPCCVSWEPRGACHALANFLIFCKN QVSLCLPRLVNSNWWQAILPSWPPRRA GIYGV |
| 4403 | 12454 | A | 5312 | 1 | 310 | FFFFET/ESHVAQAGVQWGDGLL*SSP PIGSSDSPASAS*ASGTGA/QHHAQLFV FSVETGFHPVSQDGLDLTS*SARLSLPK SWDYRHEPLAPGLGTF |
| 4404 | 12455 | A | 5313 | 598 | 882 | LIFLFSFFFFSFFFFFFFFFFFFFFFFFFFF FFFFFFFFLLLLLLLLLLLLFFFFFFFFFFFF LRQSL/DSVAQAGVQWRHLGSLQALPPR FAP |
| 4405 | 12456 | A | 5314 | 439 | 1169 | QSGHRYLYNLIQVLCFTIFLFLRODLAV L/QAGVQVQC/DSWQPRPGLKGTPTS AQVAGTGMCHHTR*IFFFFFFFFFFFFFF FFFFFFFFFFFFLRQSL/DSVAQAGVQWR NLGSLQPLPPRFKRFSCLGLPSSWDYRN APHPANCCIF/M*RRGFTMLAKLVNSG DSPASASQSGHIGVSHHARPPRYFKKYI FCRDGGLTMLLGWS*TPGLKQSSHLGFP NEWDYRCEPPCLATLIL |
| 4406 | 12457 | A | 5315 | 1 | 222 | ETGSHFVTOAGV*WCNLGLLOPLTPGLK QFSLSPSSWDHCKVPCSPANSFCTLG K*RRVSTMLPPGWS/QTP |
| 4407 | 12458 | A | 5316 | 1 | 234 | LRQSFAGWPRLECNGTIPAYCNLHLLGS SNPPASSPRULIFVVLVEMRFLYVA*AG LELLSSDLPPWHKVLGLQA |
| 4408 | 12459 | A | 5317 | 1 | 196 | FFLINLTLIVTAQFIN*LDIFDSYSTICPK PPEYIFFSRA/PNGTFTTKDHLGFKISLN KYKSI |
| 4409 | 12460 | A | 5318 | 1 | 477 | SCWSPV/WGHPPDRPREPPPS*LGIOSSPG VPQAALPPWPSPASHQASATWAVLPLPP LQGPAREPPCAPHLLRRHVQPTKTS SAPPLPPG*DLPEASFSQWACKGINKCL QGLGLVCRRTHEKDLGLGLFGLVLAM VEVRGVDLTENNSGASVPRGR |
| 4410 | 12461 | A | 5319 | 139 | 398 | FYFFFYFYLQSCSVNQAGVQ*/HCLNSL QPPPGFKRFSCLSLPSRW/YKCPPCTP NECVFS/EMGFLHVQAGLELMTSGDPP GFG |

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| 4411 | 12462 | A | 532 | 122 | 1340 | EAASKTTKDNICSWKDDTIGCKEMPTSE NCPSFALHQKISDRNHGECUEVGGKTLCO DSKVQJHERHSSECKPNRCKECCGNFSN GQHLTHQRLHVGEKPYKYEKCGKAFIS GSAFVKHGRHHTGEKPLCKCQCGKJISG SYQLTVHKSIHTGKKPYECGCGKAFLV YGKLTTHQSHITGEKPFGECECGKAFST FSYLVQHQRJHTSEKPYECKECGKAFST SPLAKHQRIHTGEKPYECKECGKSFTVY GQLTRHQSHTGEKPFESIAEIKPYRCK ECGRFTSRASYLVQHGRJHTGEKPYECK ECGKAFSTGSYLVQHQRJHTGEKPYECK ECGKAFISRHQLTVHQRVHTGEKPYECK ECGKAFRVHVHLTQHRKIHTDVKPYEC KECGKFTSRASYL |
| 4412 | 12463 | A | 5320 | 11 | 137 | RWGFTKLPRLVSNVSWPQAILSPWLPKVL NNHREALYFSLYYISKYTEQGFRNRLYP GTICQDYLWRYLLFLFIPETESCTVIRLEC SGSLQPPPRFKQFTCLRLHSSWDYRARP PWPINFCISRVQTFHHVGGQGLDLV DLCDPPASASQSGITGREHPAGTYLW EGFKSKFSRA*RTSLFFFLH |
| 4413 | 12464 | A | 5321 | 1 | 293 | LERMSFGHIQTKEDILQENTIFIATEVQIQ PNPD*TPKAFIRKCLSYRKEBRDVBH QLTCDDYMLPMHMRMSVSTSPAGAAIAS TSGASSSSSN |
| 4414 | 12465 | A | 5322 | 3 | 291 | |
| 4415 | 12466 | A | 5323 | 14 | 943 | HRILEPLIFHHFFSSAPPOPELLV/PASL TLPASGREGVPLPARLPSLPRWEPLQV WLALGAVKPLSPWPWGPNGLGKPPGT PKRRGALFCHMPGILTPWMPGARWTKP PANPST/TSPPVKKD*KLQPGGLRGK GPERGWNPPCP/RSRPPYLLC*PQTLPR A*CFPIPKMSFTGHSPCRASLGHLE/VGH GIPLWPRVQRRKSAFFVLFFFGACLCF NVNNRKP*YLECNTE*YFNVHVLVDHNI FITKQOEST*PWLPRGVSWLGAGGGYQG AWDREAPPFRIPKLPPTLASRMRSCHL |
| 4416 | 12467 | A | 5324 | 12 | 486 | |
| 4417 | 12468 | A | 5325 | 51 | 390 | DGVLPSLLGWEVVMCGSSAPLLRSPVDR DGMWGVCHPAGWSIVAQS/QFTAASNLL ASRA7LSLPSSWDYRRVPPHSAHFKFL *KWGLAMLPLRLVLSWSQVILLPQPKV LEL |
| 4418 | 12469 | A | 5326 | 279 | 380 | |
| 4419 | 12470 | A | 5327 | 618 | 818 | |
| 4420 | 12471 | A | 5328 | 1 | 197 | |
| 4421 | 12472 | A | 5329 | 2 | 498 | CPRMTPKDFQ*PVLVVTNLLGHVIDIKW MSIAFINDRAWPSAFVSDENHARICDG QHRFEVSVSELPDETVSSTVLDDLHQG LGPPPPPAEPDPLQLLLQLFGLGQLSCV VGPGWRGLSSARDKQNMVSIHKVKR PQSPLRVYVWPLRYCILPSRATVN |
| 4422 | 12473 | A | 533 | 456 | 824 | DRVLSLSPRLCSGVILAQCNLHLP/GENR FSYTLGLPSRLGITGHAPLCLGQFFVFLVE DGGFHHVGGQGLELTSSDPPTSAPVKC RDYRHEPLRLACCSFLKQENIHNCVRI YIRIFQTN |
| 4423 | 12474 | A | 5330 | 600 | 811 | PIWLSLSPWHFINQRKEKKK**DIVKREK PLMGLSTLTSI*MQSKPRKEHQNLKSEI K*LQDLSQYFGR |
| 4424 | 12475 | A | 5331 | 1 | 75 | FFFFFFFFFFKLAMFVFIFFFSK*KEIVLS QFLFVHLTYLFYVFTSLKVALKISRDIKST FLRVALFFFLNNSWFCGSTAFPSVSM CMP*LLL*FFFFFFFVKLAMFVFIFF SK |

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| 4425 | 12476 | A | 5332 | 949 | 1711 | VTIPLIPDLKGSSCVGPPKP*DCRHWTPC LTLIYFFFKVSPSVAHAGVQWHDLSL LTLSPDQV/HSPVSAF*VAGIQG/MHHHA RL/IFFFFFLRQSL/SSVAQAREQWCYH GSLQPPSPGFKRFSCLSPSSWDYRCPPP HLA/DFFVFLEMGFTMLTRLVSN*PQ/C DLPASASQTAWITGLSHRAWLNFQCFISI YGVSPCWPGWSLIPDLK*SACLSLP*CW DYKCEPPCAQITFIRKDSFADYVCSVS |
| 4426 | 12477 | C | 5333 | 11 | 154 | MESRSVARLECNAGSAHCNHLHLLGSD SPASASRVAGTGTATITPG* |
| 4427 | 12478 | C | 5334 | 163 | 270 | MNKMESLFYCFNADILIKQDYFHHQHHL YIYTKPV* |
| 4428 | 12479 | A | 5335 | 92 | 404 | WLQICVSGCICIT*MALYICINVVVVVV LFYEDVCIAVK*AFHFIHNLMCVYICM CVCVWNIEGLYIPQRYIHMAVLLHRSN SQTGSIYKFKISFIGI |
| 4429 | 12480 | A | 5336 | 2 | 1100 | FALAARLQEFGRKYFTESGLVGLLEQA AASFMSAGMYEAVNEVYKVLPIHEANR DAKKLSTIHGKLEAFSKIVHQSTGWER MFGTYFRVGFYTKFGDLDQEFFVYKE PAITKLAISHRLEGFYGERFEDVVEVI KDSNPVDKCKLDPNKAYIQITYVEPYFD TYEMKDRTYFRQKLQSSVRFMYCTPFT LDGRAHGGTSMEOQFQKGRPLDYVSCL FPYIKTRG/PMSLIKRRSSLPFEVAIED MQKKTQELAFATHQDPADPKMLQMLV QGVSVGHQVNOQPLGSCPGFSCGNT** PKALSIDIH*KLATLAFKDFTKCEDALR KNKSLIGPDQKEYQRELGEKLSALKRA LPAT |
| 4430 | 12481 | A | 5337 | 48 | 1057 | RCWENCTSTCKTMKSDPYLR/PYTTINSK WIKDLNVRPETIEENGEKFLDMLTNGD FLDITPKAQSIKTK/DKWDYIKPKSF/CI KETVNMKQ*PTD/W*KIFVRHIYKGGL VSKIYKEFIQNF*KWAKDLKRHFSEDD TQMANKYIKGCT*LIJEMHFKNHSKY YLSPLVLAIVIKKNKNK/CW*WCGIKGT L/LHCWWECLVQPLWKTEWFLARKIK LPYDPAIPLGIYSK*MKSPCKYICS/RV FIAALFIVA/K/TWRQLKPLTV*IRKICI YMPYTPMEYYPLTKTKKNPTISCHLLPT WMGLKDTVLNEISQTEKKILHNFTYVES KKKI |
| 4431 | 12482 | A | 5338 | 2 | 409 | PLALALAMAYPCPGDAHGPFPGLSP PS*PASVP/TSP/QSSA*FLCPQSPVEGL TPRILPAGGGHVPSCRPSSPGLASVSP RWGALLPGPCPTLSSGCRKGRASPRA IIPPTASLCTALWPCFSP*PGVCLONG LSLLPRRCTWPAARSTVSSLLACLCPNS PLNLLRDSSVLSHTQLRQSPHGFYPLEGA MFPAPALPPHQAALRYQPGOGLCCCLD HALLPSRDRVKGKGPALELTHFPQACV LRSGLASRLHNL |
| 4432 | 12483 | A | 5339 | 32 | 323 | KFHLGGGWFPLPFGPGGARGVGS*VR GFRPPWAPPLNPPFFKQNSGLVFAF RPSSSGG/PGPGNSPHPGGQGG*QKFRP CPSAWGTGGFP |
| 4433 | 12484 | A | 534 | 1 | 2278 | |
| 4434 | 12485 | A | 5341 | 4 | 329 | IIAHCKLKRPNSSNDPPQPPSSWDCRHAPP HPAN*FFF*EMGSCHVAQTSSQTPALNPS RYPPTSASQGAETVMSHCAQLYPCFLT KEK/FSHS*IRRTLSETSNGBY |
| 4435 | 12486 | A | 5342 | 3 | 274 | FQSQNIKILNMGVLFCFETEHSVT*AG LQWLDSLQPPPPGFKQ/FSCLLSSW DYRSPRGPVNFICFSGDEVSPYWSGWS QTSDLK |

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| 4436 | 12487 | A | 5343 | 1 | 1075 | MVDGTLILLSEALALTQTWAGSHSLK YFHTSVSRPGRGEPFRISVGYVDDTQFV RFDNDASPRMVPRAPWMEQEGSEYW DRETRSVARDTAQIFRVNLRTLARLY*QS ERRPGSHTLQWMHGCCELGDNDASFGR YEQFAYDGKDYLTNLNEDLRSWTAVDTA AQISEQKSNDAEADHQRPVYLQATFVDS FPK*LYEGKETFLHLEPPKTHVLHIFISD HEATLRCAWALGFYPAEITLWQQDGE HTQDTELVETRPAGDGTQKWAAYVVP SGEEQRYTCHVQHEGLPEPVTLRWEAR FPSPIPLPSWASLLGLVLLGSVSEAVIV AAVIRKKSSGHLPTIGGKGSYFKG |
| 4437 | 12488 | A | 5344 | 58 | 426 | KLQL*FFFWFNCLFTYFLETVECSGAI AHCCLKLGSHPASASLVAKITGACHP AWLI*VVLIVLFRKRWQSHLKMVEKRF LSEGQILSVYHFRVPLLQNDRLAQILG RKREMY |
| 4438 | 12489 | A | 5345 | 3 | 284 | KKILRKKILRKSV*TD*SSQENUP*KQF LSNHPKCTITLSMRNMSIMKKGRISE FIKLFPSLLSHLLVIEWGLYIYLTPPN NTF |
| 4439 | 12490 | A | 5346 | 2 | 225 | TLPCTLSTSTPWSASSQEREMSFQDG*P VG*PPLTAVPCCSVWGLRRL*GERTKLG IGAAGGFHSYDGNQT |
| 4440 | 12491 | A | 5347 | 3 | 104 | WSTVARS*LTATSCSFCSPSSWDCRRV PPCLA/SFHFOYIALNN*A*AILQPSKVL GL*ASALQVAGTAGVYHIAW |
| 4441 | 12492 | A | 5348 | 2 | 392 | TGKNEIYCICFIDLEYQ*KIGLLHIGDKE EYS/WNSGYFIGYCLELPCPVKVSGN*N DSIEAAVLMITTPSKIKI*VTLQSKASPIK VLTQVIGDIKGILENGHYKYQL*QFFKLQ KGNDNH |
| 4442 | 12493 | A | 5349 | 2 | 67 | AAED*HCPASETYKTITLWVTLPEVG KSVPLINTEATHSTLPSFGQCVSLASITV VGIDGQASKPLKTPQLWCQLGQHSFMH SFLVIRTFPAPLGRDILTNLSASLTIPGLE PHLIAAFCSSSKPPSHPLVSLHLKPQV*D RLGNLQDHHRCFG |
| 4443 | 12494 | A | 535 | 750 | 1053 | PSTLSSLNSRHDDEATRTSTSEGLEEGEV BGETLLIVESVEDQASVLDLSDHDSGGIS LNSDEGDVSWMEELSYFCCKCQKWLP ASKELLKSFDSLIPV |
| 4444 | 12495 | A | 5350 | 2 | 275 | ETESCSVAIRLECSGMISAHCNCLPDTG NSPASAS*VAGIIGACHHAQLIFVFLVET EFHHVFHHVVGASLEFLNLVPPRPPK ALGLOG |
| 4445 | 12496 | A | 5351 | 3 | 1031 | SSAPEAAKPTPCHRCRGLVDKFNQGM VDTAKKNGGGGNTAWEKTLKSYESSEI RLLEILEGLCESSDFECNQMLEAQEEHLE AWWLQLKSEYPLDFEWFVKVTLKVCVC VGTYYGPDCLACQGGSGRQPCSGNGHCS GDGSRQGDGSCRCMHMGYQPLCUDCM DRLLQLRSRNETHSICTACDESKITCF GP*PTGLRRSCEVGWVWDEGACVDVE KCAAQTPPCSAAQFCKNANGSYTCE/EG DSSWVGCPGKPGNCCKQCSGYAREHG QCADVERVPH*PEKTLCEKTKTCYNTP GSYVVCVCPDGFET/RRCLCAAGRRLLK POKGESPTQLPLP |
| 4446 | 12497 | A | 5352 | 206 | 330 | KMLQLALQSCIKVRTLSRHLGAGVTA HEE*CPCCHPMIKQ |
| 4447 | 12498 | A | 5353 | 1 | 8271 | |
| 4448 | 12499 | A | 5354 | 2 | 10028 | |